

ICS Radiation Test Results

**RH1021CMH-5
5V REFFERENCE (BIASED)
LINEAR TECHNOLOGY CORPORATION
P.O. # 46027L**

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DEVICE TYPE: RH1021CMH-5 5V REFERENCE
LINEAR TECHNOLOGY CORPORATION
RADIATION SOURCE: SHEPHERD 484(Co60), 1.25MeV
.
D/C 0617B || PACKAGE 8-PIN CAN || LOT# 384568.2
LOG# 1588 || TEST DATE 08/02/07 || RTP# 688
P.O.#46027L
.
Test Conductor: AJ Kenna
Test Administrator: Dr. Michael K. Gauthier
.
.....

**ICS RADIATION TECHNOLOGIES, INC.
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www.icsrad.com**

Radiation Test Results

RH1021CMH-5
5 Volt Reference
Linear Technology Corporation
D/C 0617B, Lot# 384568.2
Test Date 08-02-07
Log# 1588 and 1589, TID Test
P.O.# 46027L

This test consisted of two test logs, Logs 1588 and 1589. The test was to compare the radiation effects differences between two bias conditions: Log 1588, +30 volts and Log 1589 which had all leads grounded. The six test requirements are stated in test procedure RTP 688, dated March 23, 2007.

There was very little difference noted between the two bias conditions for all parameters tested. The test results of the two tests (both bias conditions) were less than the LTC data sheet limits of 20krad(Si) at the 50krad(Si) test level.

These lots **PASSED** the six test requirements as stated in the Radiation Test Procedure RTP 688, dated March 23, 2007.

TID BIASED DEVICES, Log 1588

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.76mA. The maximum current was 0.81mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.000V. The maximum voltage was 5.003V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -4.07ppm/V. The parameter maximum was -0.03ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.45ppm/V. The parameter maximum was 3.05ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -13.9ppm/mA. The parameter maximum was -12.8ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 60.9ppm/mA. The parameter maximum was 63.5ppm/mA.

TID GROUNDED DEVICES, Log 1589

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.74mA. The maximum current was 0.83mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.002V. The maximum voltage was 5.002V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -7.94ppm/V. The parameter maximum was 1.33ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.74ppm/V. The parameter maximum was 0.96ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -14.0ppm/mA. The parameter maximum was -12.3ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 61.1ppm/mA. The parameter maximum was 64.0ppm/mA.

ANOMOLIES:

1. There were no device anomalies during this test.

If you should require any further clarification on this matter, please contact me directly: TEL-562-923-1837, FAX-562-923-3609, or E-Mail mike@icsrad.com.

ICS Radiation Technologies, Inc.

Dr. Michael K. Gauthier, P.E.
President
September 10, 2007

March 23, 2007

RADIATION TEST PROCEDURE

No. 688

Device Type: RH1021CMH-5 5 Volt REFERENCE
Manufacturer: Linear Technology Corp.

TEST	TEST NAME	TEST CONDITIONS	Limits Exposure Levels rad(Si)				Units
			20k	50k	100k	200k	
1	Supply Current		1.2	1.2	1.2	1.2	mA Max
2	Output Voltage		4.993 5.007	4.991 5.009	4.9875 5.0125	4.984 5.016	V Min V Max
3	Line Regulation	$7.2V \leq V_{in} \leq 10V$	12	13.5	15	18	ppm/V Max
4	Line Regulation	$10V \leq V_{in} \leq 40V$	6	6	7	9	ppm/V Max
5	Load Regulation Source	$0 \leq I_{out} \leq 10mA$	20	20	20	20	ppm/mA Max
6	Load Regulation Sink	$0 \leq I_{out} \leq 10mA$	100	100	100	100	ppm/mA Max

Measurements shall be made at room (ambient) temperature.

Test conducted using an Analog Devices LTS-2020 Component Test System, with the LTS-2101 Family Board, LTS0600/0604 Socket Assembly, LTS0325/RH1021-5 DUT board, RH1021 BGSS030309.

Software: RH1021-5. "RH1021-5.SRC"

Data Processing use King Program: P99/90 Ktl =4.666 for 5 devices

Return samples to customer.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

SUPPLY CURRENT		(MA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623	8.60E-01	8.70E-01	8.40E-01	8.50E-01	8.60E-01	8.50E-01	8.50E-01
	625	8.20E-01	8.20E-01	8.10E-01	8.00E-01	8.00E-01	8.00E-01	8.20E-01
	626	7.90E-01	7.90E-01	7.80E-01	7.80E-01	7.70E-01	7.80E-01	7.80E-01
	627	8.30E-01	8.20E-01	8.10E-01	8.10E-01	8.10E-01	8.00E-01	8.10E-01
	631	7.90E-01	7.70E-01	7.70E-01	7.70E-01	7.60E-01	7.60E-01	7.80E-01
	632	7.90E-01	7.80E-01	7.60E-01	7.60E-01	7.60E-01	7.60E-01	7.60E-01
	MINIMUM	7.90E-01	7.70E-01	7.60E-01	7.60E-01	7.60E-01	7.60E-01	7.60E-01
	MEAN	8.04E-01	7.96E-01	7.86E-01	7.84E-01	7.80E-01	7.80E-01	7.90E-01
	MAXIMUM	8.30E-01	8.20E-01	8.10E-01	8.10E-01	8.10E-01	8.00E-01	8.20E-01
	+P 99/90	8.95E-01	9.03E-01	8.93E-01	8.81E-01	8.89E-01	8.73E-01	9.04E-01
	-P 99/90	7.13E-01	6.89E-01	6.79E-01	6.87E-01	6.71E-01	6.87E-01	6.76E-01
	SIGMA	1.95E-02	2.30E-02	2.30E-02	2.07E-02	2.35E-02	2.00E-02	2.45E-02

SUPPLY CURRENT		(MA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623		1.00E-02	-2.00E-02	-1.00E-02	0.00E+00	-1.00E-02	-1.00E-02
	625		0.00E+00	-1.00E-02	-2.00E-02	-2.00E-02	-2.00E-02	0.00E+00
	626		0.00E+00	-1.00E-02	-1.00E-02	-2.00E-02	-1.00E-02	-1.00E-02
	627		-1.00E-02	-2.00E-02	-2.00E-02	-2.00E-02	-3.00E-02	-2.00E-02
	631		-2.00E-02	-2.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-1.00E-02
	632		-1.00E-02	-3.00E-02	-3.00E-02	-3.00E-02	-3.00E-02	-3.00E-02
	MINIMUM		-2.00E-02	-3.00E-02	-3.00E-02	-3.00E-02	-3.00E-02	-3.00E-02
	MEAN		-8.00E-03	-1.80E-02	-2.00E-02	-2.40E-02	-2.40E-02	-1.40E-02
	MAXIMUM		0.00E+00	-1.00E-02	-1.00E-02	-2.00E-02	-1.00E-02	0.00E+00
	+P 99/90		3.10E-02	2.10E-02	1.30E-02	1.56E-03	1.77E-02	3.92E-02
	-P 99/90		-4.70E-02	-5.70E-02	-5.30E-02	-4.96E-02	-6.57E-02	-6.72E-02
	SIGMA		8.37E-03	8.37E-03	7.07E-03	5.48E-03	8.94E-03	1.14E-02

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
 LOG# 1588 || TEST DATE 8-02-07 || RTP# 688
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

OUTPUT VOLTAGE		(V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00
	625	4.997E+00	4.998E+00	4.999E+00	5.000E+00	5.000E+00	5.000E+00	5.000E+00
	626	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.003E+00	5.002E+00	5.002E+00
	627	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.003E+00	5.002E+00	5.002E+00
	631	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.003E+00	5.002E+00	5.002E+00
	632	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.002E+00	5.002E+00	5.002E+00
	MINIMUM	4.997E+00	4.998E+00	4.999E+00	5.000E+00	5.000E+00	5.000E+00	5.000E+00
	MEAN	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	MAXIMUM	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.003E+00	5.002E+00	5.002E+00
	+P 99/90	5.002E+00	5.004E+00	5.004E+00	5.005E+00	5.007E+00	5.006E+00	5.006E+00
	-P 99/90	4.995E+00	4.996E+00	4.997E+00	4.997E+00	4.998E+00	4.997E+00	4.997E+00
	SIGMA	8.289E-04	8.620E-04	8.289E-04	8.649E-04	9.592E-04	9.826E-04	9.094E-04

OUTPUT VOLTAGE		(V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623		5.000E-04	4.000E-04	4.000E-04	4.000E-04	2.000E-04	6.000E-04
	625		1.200E-03	2.000E-03	2.800E-03	3.300E-03	2.920E-03	2.700E-03
	626		1.300E-03	2.000E-03	3.000E-03	3.700E-03	3.400E-03	3.000E-03
	627		1.200E-03	2.000E-03	2.900E-03	3.600E-03	3.300E-03	2.800E-03
	631		1.300E-03	1.900E-03	2.700E-03	3.600E-03	3.200E-03	2.900E-03
	632		1.300E-03	2.100E-03	2.900E-03	3.400E-03	3.100E-03	2.800E-03
	MINIMUM		1.200E-03	1.900E-03	2.700E-03	3.300E-03	2.920E-03	2.700E-03
	MEAN		1.260E-03	2.000E-03	2.860E-03	3.520E-03	3.184E-03	2.840E-03
	MAXIMUM		1.300E-03	2.100E-03	3.000E-03	3.700E-03	3.400E-03	3.000E-03
	+P 99/90		1.516E-03	2.330E-03	3.392E-03	4.287E-03	4.048E-03	3.372E-03
	-P 99/90		1.004E-03	1.670E-03	2.328E-03	2.753E-03	2.320E-03	2.308E-03
	SIGMA		5.477E-05	7.071E-05	1.140E-04	1.643E-04	1.851E-04	1.140E-04

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
 LOG# 1588 || TEST DATE 8-02-07 || RTP# 688
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

LINE REG 7.2V TO 10V		(PPM/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623	3.21E+00	4.50E-01	2.93E+00	-1.49E+00	9.30E-01	8.10E-01	2.57E+00
	625	1.60E-01	7.90E-01	-7.90E-01	-4.10E-01	-1.76E+00	-3.72E+00	-1.34E+00
	626	-9.40E-01	-1.09E+00	-2.00E-02	-3.95E+00	-2.48E+00	-2.11E+00	-3.54E+00
	627	4.06E+00	3.50E-01	-4.30E-01	-2.55E+00	-4.07E+00	-1.93E+00	-1.18E+00
	631	1.51E+00	6.70E-01	5.80E-01	-1.69E+00	-2.47E+00	-4.22E+00	-1.47E+00
	632	2.27E+00	-1.06E+00	-2.71E+00	-1.75E+00	-3.00E-02	-2.12E+00	-2.83E+00
	MINIMUM	-9.40E-01	-1.09E+00	-2.71E+00	-3.95E+00	-4.07E+00	-4.22E+00	-3.54E+00
	MEAN	1.41E+00	-6.80E-02	-6.74E-01	-2.07E+00	-2.16E+00	-2.82E+00	-2.07E+00
	MAXIMUM	4.06E+00	7.90E-01	5.80E-01	-4.10E-01	-3.00E-02	-1.93E+00	-1.18E+00
	+P 99/90	1.04E+01	4.29E+00	5.14E+00	4.00E+00	4.66E+00	2.16E+00	2.83E+00
	-P 99/90	-7.58E+00	-4.42E+00	-6.49E+00	-8.14E+00	-8.98E+00	-7.80E+00	-6.98E+00
	SIGMA	1.93E+00	9.33E-01	1.25E+00	1.30E+00	1.46E+00	1.07E+00	1.05E+00

LINE REG 7.2V TO 10V		(PPM/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623		-2.76E+00	-2.80E-01	-4.70E+00	-2.28E+00	-2.40E+00	-6.40E-01
	625		6.30E-01	-9.50E-01	-5.70E-01	-1.92E+00	-3.88E+00	-1.50E+00
	626		-1.50E-01	9.20E-01	-3.01E+00	-1.54E+00	-1.17E+00	-2.60E+00
	627		-3.71E+00	-4.49E+00	-6.61E+00	-8.13E+00	-5.99E+00	-5.24E+00
	631		-8.40E-01	-9.30E-01	-3.20E+00	-3.98E+00	-5.73E+00	-2.98E+00
	632		-3.33E+00	-4.98E+00	-4.02E+00	-2.30E+00	-4.39E+00	-5.10E+00
	MINIMUM		-3.71E+00	-4.98E+00	-6.61E+00	-8.13E+00	-5.99E+00	-5.24E+00
	MEAN		-1.48E+00	-2.09E+00	-3.48E+00	-3.57E+00	-4.23E+00	-3.48E+00
	MAXIMUM		6.30E-01	9.20E-01	-5.70E-01	-1.54E+00	-1.17E+00	-1.50E+00
	+P 99/90		7.56E+00	9.77E+00	6.65E+00	9.08E+00	4.76E+00	4.14E+00
	-P 99/90		-1.05E+01	-1.39E+01	-1.36E+01	-1.62E+01	-1.32E+01	-1.11E+01
	SIGMA		1.94E+00	2.54E+00	2.17E+00	2.71E+00	1.93E+00	1.63E+00

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1588 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

LINE REG 10V TO 40V		(PPM/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623	1.10E-01	-3.10E-01	1.50E-01	4.00E-02	-1.10E-01	-2.10E-01	-8.00E-02
	625	0.00E+00	2.80E-01	1.70E-01	5.00E-02	7.60E-01	5.50E-01	2.70E-01
	626	0.00E+00	3.00E-01	1.60E-01	4.00E-01	4.50E-01	4.70E-01	3.50E-01
	627	-2.00E-01	1.80E-01	8.00E-02	1.90E-01	4.50E-01	4.80E-01	2.80E-01
	631	2.20E+00	2.69E+00	2.89E+00	3.13E+00	3.05E+00	2.94E+00	2.80E+00
	632	3.00E-02	2.30E-01	1.90E-01	5.10E-01	6.10E-01	5.60E-01	4.90E-01
	MINIMUM	-2.00E-01	1.80E-01	8.00E-02	5.00E-02	4.50E-01	4.70E-01	2.70E-01
	MEAN	4.06E-01	7.36E-01	6.98E-01	8.56E-01	1.06E+00	1.00E+00	8.38E-01
	MAXIMUM	2.20E+00	2.69E+00	2.89E+00	3.13E+00	3.05E+00	2.94E+00	2.80E+00
	+P 99/90	5.10E+00	5.84E+00	6.42E+00	6.85E+00	6.28E+00	6.06E+00	5.97E+00
	-P 99/90	-4.29E+00	-4.37E+00	-5.02E+00	-5.13E+00	-4.15E+00	-4.06E+00	-4.30E+00
	SIGMA	1.01E+00	1.09E+00	1.23E+00	1.28E+00	1.12E+00	1.09E+00	1.10E+00

LINE REG 10V TO 40V		(PPM/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623		-4.20E-01	4.00E-02	-7.00E-02	-2.20E-01	-3.20E-01	-1.90E-01
	625		2.80E-01	1.70E-01	5.00E-02	7.60E-01	5.50E-01	2.70E-01
	626		3.00E-01	1.60E-01	4.00E-01	4.50E-01	4.70E-01	3.50E-01
	627		3.80E-01	2.80E-01	3.90E-01	6.50E-01	6.80E-01	4.80E-01
	631		4.90E-01	6.90E-01	9.30E-01	8.50E-01	7.40E-01	6.00E-01
	632		2.00E-01	1.60E-01	4.80E-01	5.80E-01	5.30E-01	4.60E-01
	MINIMUM		2.00E-01	1.60E-01	5.00E-02	4.50E-01	4.70E-01	2.70E-01
	MEAN		3.30E-01	2.92E-01	4.50E-01	6.58E-01	5.94E-01	4.32E-01
	MAXIMUM		4.90E-01	6.90E-01	9.30E-01	8.50E-01	7.40E-01	6.00E-01
	+P 99/90		8.43E-01	1.36E+00	1.92E+00	1.38E+00	1.12E+00	1.02E+00
	-P 99/90		-1.83E-01	-7.73E-01	-1.02E+00	-6.74E-02	7.17E-02	-1.59E-01
	SIGMA		1.10E-01	2.28E-01	3.15E-01	1.55E-01	1.12E-01	1.27E-01

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED

RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2

LOG# 1588 || TEST DATE 8-02-07 || RTP# 688

P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

LOAD REG SOURCING		PPMMA						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623	-1.23E+01	-1.32E+01	-1.27E+01	-1.26E+01	-1.28E+01	-1.38E+01	-1.21E+01
	625	-1.28E+01	-1.35E+01	-1.36E+01	-1.31E+01	-1.35E+01	-1.34E+01	-1.33E+01
	626	-1.32E+01	-1.38E+01	-1.32E+01	-1.32E+01	-1.31E+01	-1.28E+01	-1.36E+01
	627	-1.30E+01	-1.22E+01	-1.22E+01	-1.30E+01	-1.28E+01	-1.26E+01	-1.38E+01
	631	-1.24E+01	-1.23E+01	-1.20E+01	-1.23E+01	-1.39E+01	-1.24E+01	-1.23E+01
	632	-1.27E+01	-1.29E+01	-1.31E+01	-1.23E+01	-1.39E+01	-1.28E+01	-1.13E+01
	MINIMUM	-1.32E+01	-1.38E+01	-1.36E+01	-1.32E+01	-1.39E+01	-1.34E+01	-1.38E+01
	MEAN	-1.28E+01	-1.30E+01	-1.28E+01	-1.28E+01	-1.34E+01	-1.28E+01	-1.28E+01
	MAXIMUM	-1.24E+01	-1.22E+01	-1.20E+01	-1.23E+01	-1.28E+01	-1.24E+01	-1.13E+01
	+P 99/90	-1.14E+01	-9.72E+00	-9.65E+00	-1.08E+01	-1.11E+01	-1.11E+01	-8.01E+00
	-P 99/90	-1.42E+01	-1.62E+01	-1.60E+01	-1.47E+01	-1.57E+01	-1.45E+01	-1.77E+01
	SIGMA	2.94E-01	6.93E-01	6.81E-01	4.19E-01	4.96E-01	3.68E-01	1.04E+00

LOAD REG SOURCING		PPMMA				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	623		-8.80E-01	-4.20E-01	-2.60E-01	-4.60E-01	-1.50E+00	2.30E-01
	625		-6.80E-01	-8.00E-01	-2.30E-01	-6.20E-01	-5.40E-01	-4.30E-01
	626		-6.30E-01	-6.00E-02	-5.00E-02	9.00E-02	3.60E-01	-4.50E-01
	627		8.00E-01	7.80E-01	6.00E-02	2.20E-01	4.00E-01	-7.30E-01
	631		8.00E-02	4.00E-01	7.00E-02	-1.51E+00	4.00E-02	7.00E-02
	632		-2.60E-01	-4.00E-01	3.40E-01	-1.24E+00	-1.10E-01	1.38E+00
	MINIMUM		-6.80E-01	-8.00E-01	-2.30E-01	-1.51E+00	-5.40E-01	-7.30E-01
	MEAN		-1.38E-01	-1.60E-02	3.80E-02	-6.12E-01	3.00E-02	-3.20E-02
	MAXIMUM		8.00E-01	7.80E-01	3.40E-01	2.20E-01	4.00E-01	1.38E+00
	+P 99/90		2.70E+00	2.91E+00	1.01E+00	2.99E+00	1.82E+00	3.89E+00
	-P 99/90		-2.97E+00	-2.94E+00	-9.30E-01	-4.22E+00	-1.76E+00	-3.95E+00
	SIGMA		6.08E-01	6.27E-01	2.08E-01	7.72E-01	3.84E-01	8.40E-01

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED

RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2

LOG# 1588 || TEST DATE 8-02-07 || RTP# 688

P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH11021CMH-5 5V REFERENCE (LTC) BIASED

LOAD REG SINKING		PPMMA						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	623	5.81E+01	5.82E+01	5.91E+01	5.82E+01	5.74E+01	5.84E+01	5.84E+01
	625	5.72E+01	5.90E+01	5.97E+01	5.94E+01	6.09E+01	5.87E+01	5.83E+01
	626	5.83E+01	5.90E+01	6.04E+01	6.14E+01	6.11E+01	6.08E+01	6.10E+01
	627	6.10E+01	6.19E+01	6.22E+01	6.19E+01	6.35E+01	6.28E+01	6.23E+01
	631	5.72E+01	5.91E+01	5.87E+01	5.94E+01	6.11E+01	5.99E+01	5.90E+01
	632	5.94E+01	6.28E+01	6.13E+01	6.19E+01	6.35E+01	6.26E+01	6.25E+01
	MINIMUM	5.72E+01	5.90E+01	5.87E+01	5.94E+01	6.09E+01	5.87E+01	5.83E+01
	MEAN	5.86E+01	6.04E+01	6.05E+01	6.08E+01	6.20E+01	6.10E+01	6.06E+01
	MAXIMUM	6.10E+01	6.28E+01	6.22E+01	6.19E+01	6.35E+01	6.28E+01	6.25E+01
	+P 99/90	6.61E+01	6.91E+01	6.68E+01	6.68E+01	6.84E+01	6.91E+01	6.94E+01
	-P 99/90	5.11E+01	5.17E+01	5.41E+01	5.48E+01	5.56E+01	5.29E+01	5.18E+01
	SIGMA	1.61E+00	1.86E+00	1.36E+00	1.29E+00	1.37E+00	1.74E+00	1.88E+00

LOAD REG SINKING		PPMMA				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	623		9.00E-02	9.70E-01	8.00E-02	-7.10E-01	3.20E-01	2.70E-01
	625		1.82E+00	2.55E+00	2.21E+00	3.70E+00	1.56E+00	1.15E+00
	626		6.50E-01	2.04E+00	3.03E+00	2.78E+00	2.52E+00	2.64E+00
	627		9.70E-01	1.24E+00	9.30E-01	2.51E+00	1.78E+00	1.28E+00
	631		1.93E+00	1.50E+00	2.24E+00	3.87E+00	2.73E+00	1.79E+00
	632		3.39E+00	1.84E+00	2.49E+00	4.09E+00	3.19E+00	3.04E+00
	MINIMUM		6.50E-01	1.24E+00	9.30E-01	2.51E+00	1.56E+00	1.15E+00
	MEAN		1.75E+00	1.83E+00	2.18E+00	3.39E+00	2.36E+00	1.98E+00
	MAXIMUM		3.39E+00	2.55E+00	3.03E+00	4.09E+00	3.19E+00	3.04E+00
	+P 99/90		6.73E+00	4.19E+00	5.78E+00	6.66E+00	5.51E+00	5.87E+00
	-P 99/90		-3.22E+00	-5.22E-01	-1.42E+00	1.21E-01	-7.98E-01	-1.91E+00
	SIGMA		1.07E+00	5.05E-01	7.72E-01	7.01E-01	6.76E-01	8.33E-01

DEVICE TYPE: RH1021CMH-5 5V REFERENCE (LTC) BIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

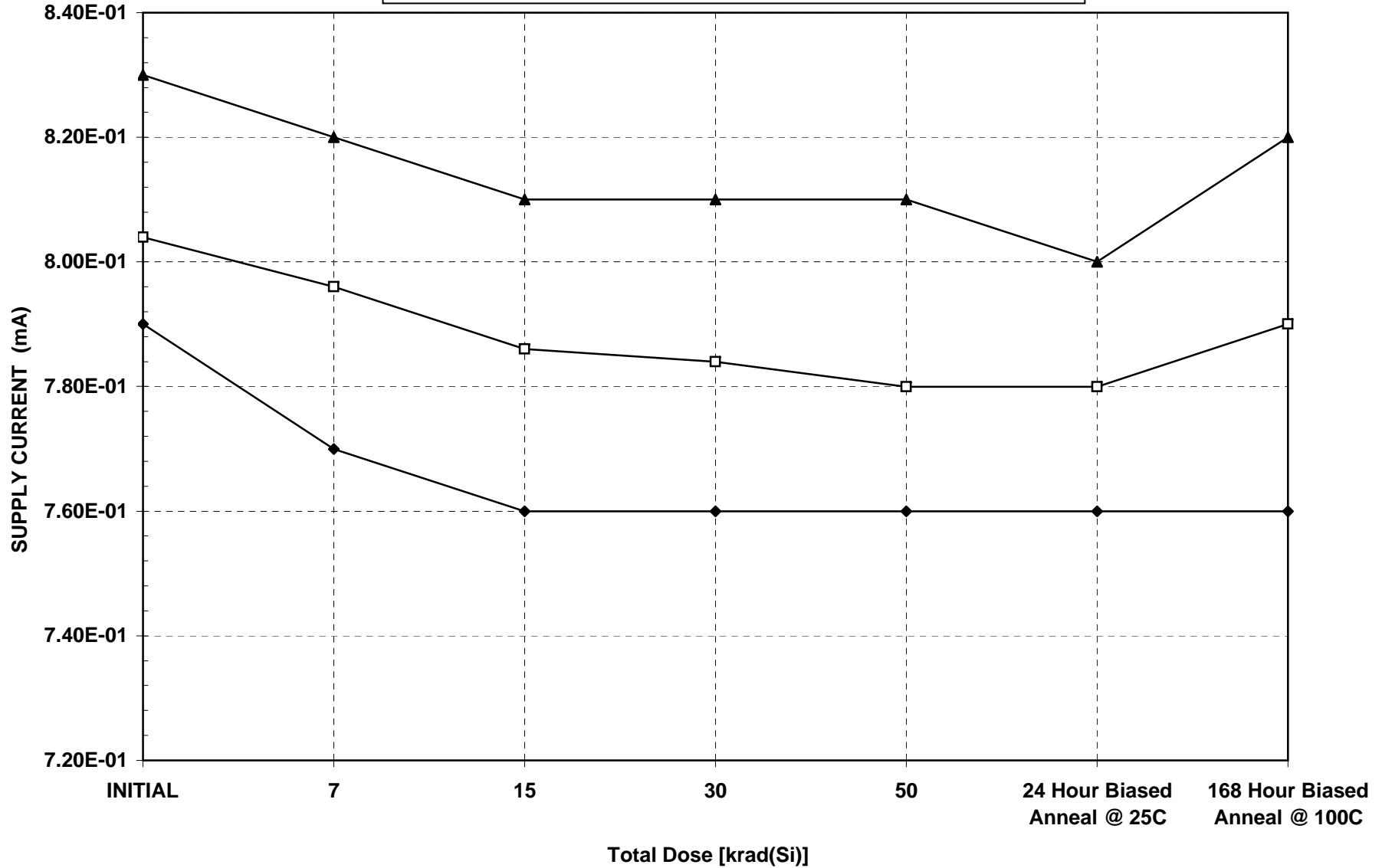
D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1588 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

RH11021CMH-5 5V REFERENCE (LTC) BIASED

I C S Radiation Test Results Log # 1588 8/02/07

SUPPLY CURRENT (mA)

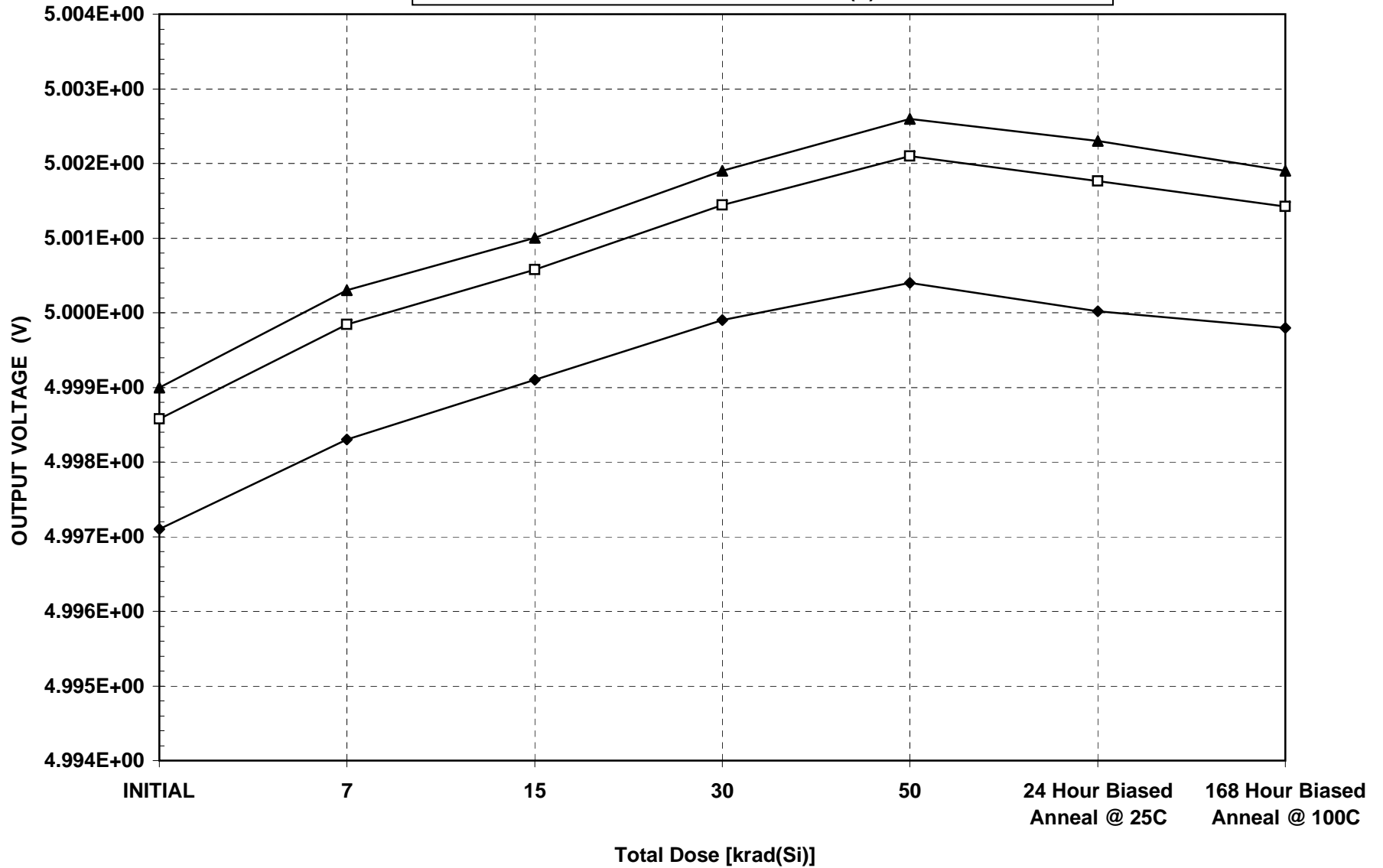


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) BIASED

I C S Radiation Test Results Log # 1588 8/02/07

OUTPUT VOLTAGE (V)

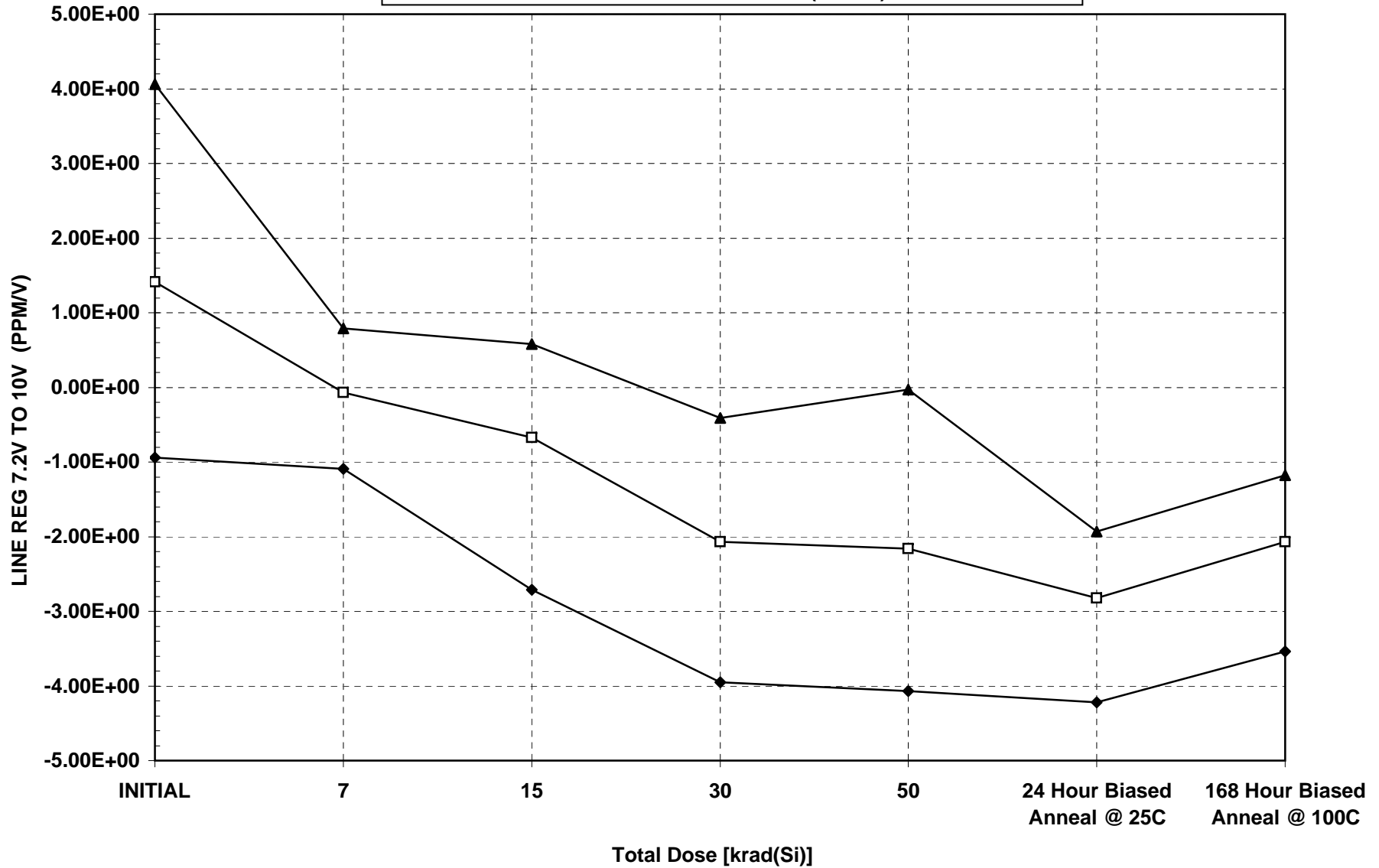


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) BIASED

IC S Radiation Test Results Log # 1588 8/02/07

LINE REG 7.2V TO 10V (PPM/V)



◆ MINIMUM

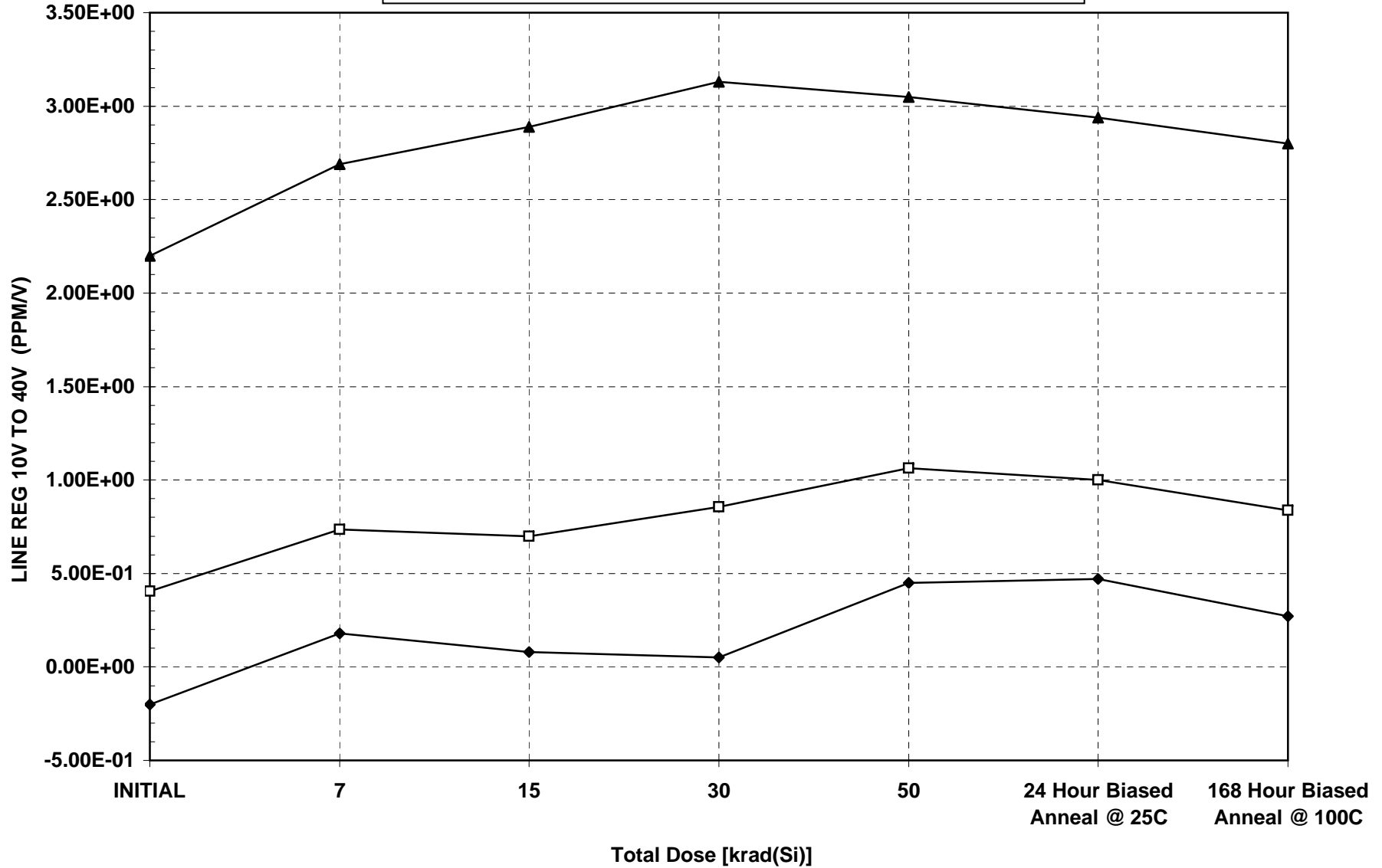
□ MEAN

▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) BIASED

IC S Radiation Test Results Log # 1588 8/02/07

LINE REG 10V TO 40V (PPM/V)

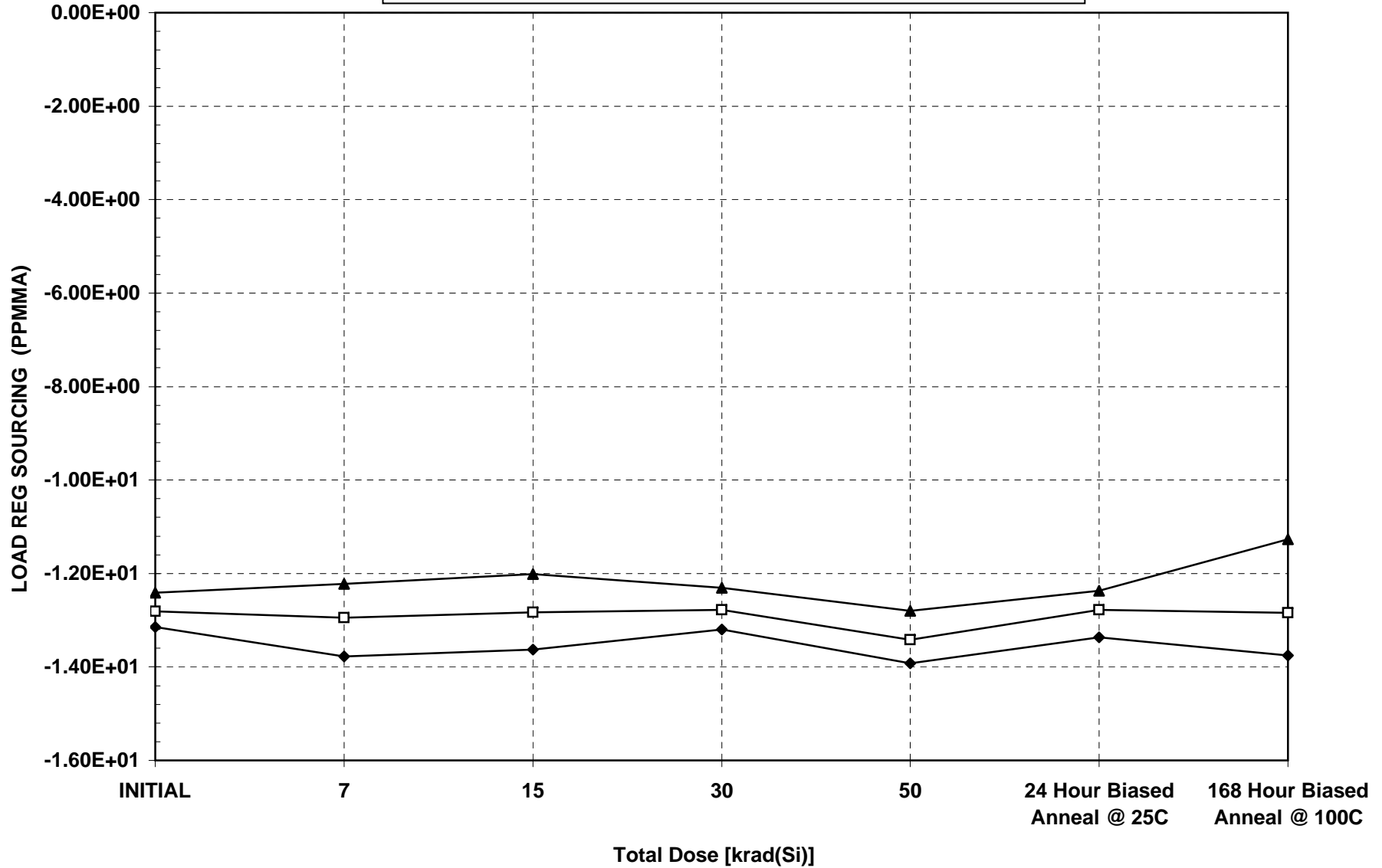


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) BIASED

IC S Radiation Test Results Log # 1588 8/02/07

LOAD REG SOURCING (PPMMA)

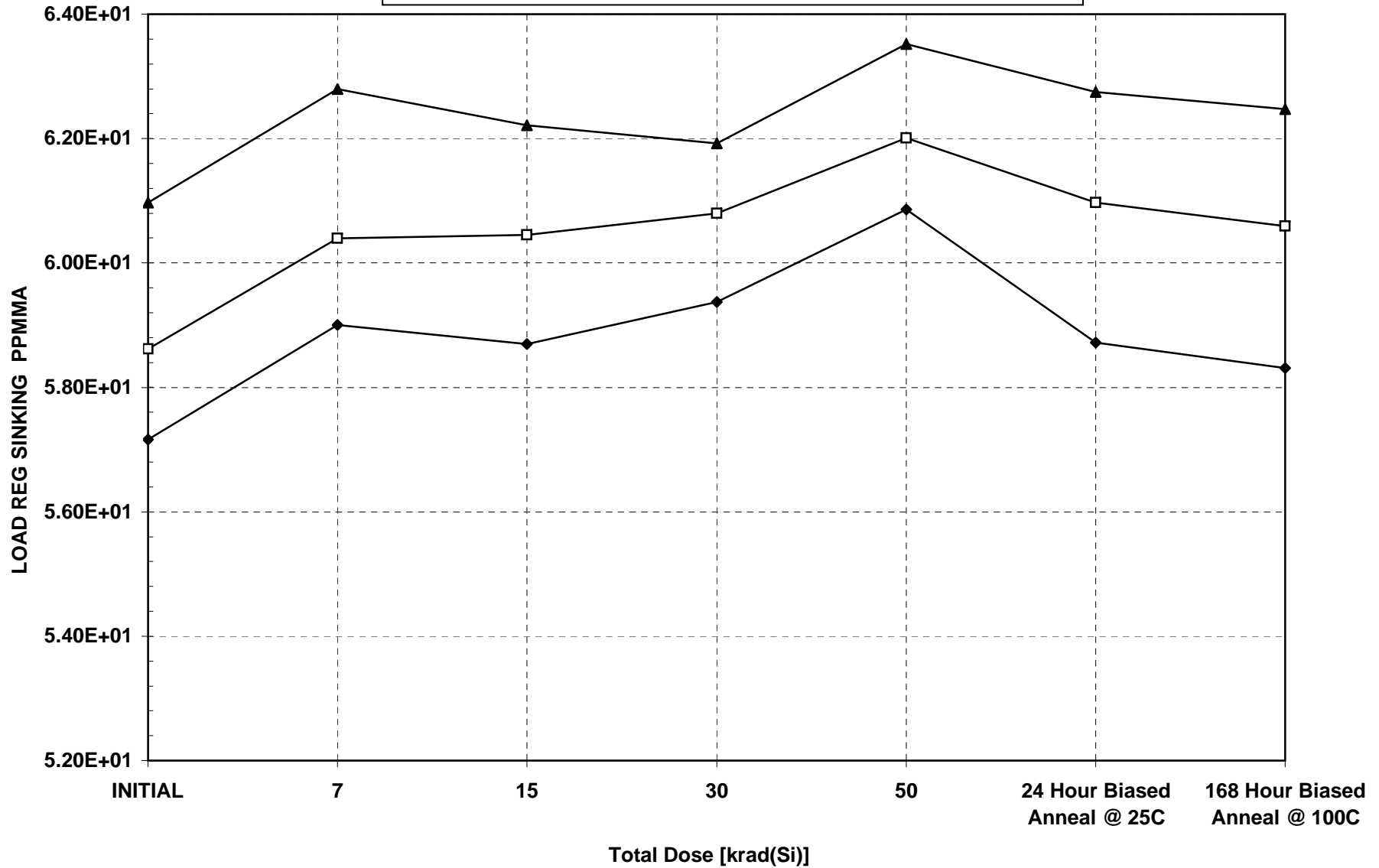


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) BIASED

I C S Radiation Test Results Log # 1588 8/02/07

LOAD REG SINKING PPMMA



◆ MINIMUM □ MEAN ▲ MAXIMUM

ICS Radiation Test Results

**RH1021CMH-5
5 VOLT REFERENCE (UNBIASED)
LINEAR TECHNOLOGY CORPORATION
P.O. # 46027L**

.....
.
. DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE .
. LINEAR TECHNOLOGY CORPORATION .
. RADIATION SOURCE: SHEPHERD 484(Co60), 1.25MeV .
. D/C 0617B || PACKAGE TO-5 (8-LEAD CAN) || LOT# 384568.2 .
. LOG# 1589 || TEST DATE 08/02/07 || RTP# 688 .
. P.O.#46027L .
. Test Conductor: A.J. Kenna .
. Test Administrator: Dr. Michael K. Gauthier .
.....

**ICS RADIATION TECHNOLOGIES, INC.
8416 Florence Ave, Suite 207
Downey, CA 90240-3949**

**TEL: 800-297-8688
TEL: 562-923-1837
FAX: 562-923-3609
INTERNET e-mail: support@icsrad.com
www.icsrad.com**

Radiation Test Results

RH1021CMH-5
5 Volt Reference
Linear Technology Corporation
D/C 0617B, Lot# 384568.2
Test Date 08-02-07
Log# 1588 and 1589, TID Test
P.O.# 46027L

This test consisted of two test logs, Logs 1588 and 1589. The test was to compare the radiation effective differences between two bias conditions: Log 1588, +30 volts and Log 1589 which had all leads grounded. The six test requirements are stated in test procedure RTP 688, dated March 23, 2007.

There was very little difference noted between the two bias conditions for all parameters tested. The test results of the two tests (both bias conditions) were less than the LTC data sheet limits of 20krad(Si) at the 50krad(Si) test level.

These lots **PASSED** the six test requirements as stated in the Radiation Test Procedure RTP 688, dated March 23, 2007.

TID BIASED DEVICES, Log 1588

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.76mA. The maximum current was 0.81mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.000V. The maximum voltage was 5.003V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -4.07ppm/V. The parameter maximum was -0.03ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.45ppm/V. The parameter maximum was 3.05ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -13.9ppm/mA. The parameter maximum was -12.8ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 60.9ppm/mA. The parameter maximum was 63.5ppm/mA.

TID GROUNDED DEVICES, Log 1589

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.74mA. The maximum current was 0.83mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.002V. The maximum voltage was 5.002V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -7.94ppm/V. The parameter maximum was 1.33ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.74ppm/V. The parameter maximum was 0.96ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -14.0ppm/mA. The parameter maximum was -12.3ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 61.1ppm/mA. The parameter maximum was 64.0ppm/mA.

ANOMOLIES:

1. There were no device anomalies during this test.

If you should require any further clarification on this matter, please contact me directly: TEL-562-923-1837, FAX-562-923-3609, or E-Mail mike@icsrad.com.

ICS Radiation Technologies, Inc.

Dr. Michael K. Gauthier, P.E.
President
September 10, 2007

March 23, 2007

RADIATION TEST PROCEDURE

No. 688

Device Type: RH1021CMH-5 5 Volt REFERENCE
Manufacturer: Linear Technology Corp.

TEST	TEST NAME	TEST CONDITIONS	Limits Exposure Levels rad(Si)				Units
			20k	50k	100k	200k	
1	Supply Current		1.2	1.2	1.2	1.2	mA Max
2	Output Voltage		4.993 5.007	4.991 5.009	4.9875 5.0125	4.984 5.016	V Min V Max
3	Line Regulation	$7.2V \leq V_{in} \leq 10V$	12	13.5	15	18	ppm/V Max
4	Line Regulation	$10V \leq V_{in} \leq 40V$	6	6	7	9	ppm/V Max
5	Load Regulation Source	$0 \leq I_{out} \leq 10mA$	20	20	20	20	ppm/mA Max
6	Load Regulation Sink	$0 \leq I_{out} \leq 10mA$	100	100	100	100	ppm/mA Max

Measurements shall be made at room (ambient) temperature.

Test conducted using an Analog Devices LTS-2020 Component Test System, with the LTS-2101 Family Board, LTS0600/0604 Socket Assembly, LTS0325/RH1021-5 DUT board, RH1021 BGSS030309.

Software: RH1021-5. "RH1021-5.SRC"

Data Processing use King Program: P99/90 Ktl =4.666 for 5 devices

Return samples to customer.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

SUPPLY CURRENT		(mA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N		-----						
CONTROL	623	8.00E-01	8.60E-01	8.40E-01	8.50E-01	8.50E-01	8.50E-01	8.50E-01
	633	7.70E-01	7.70E-01	7.70E-01	7.60E-01	7.50E-01	7.60E-01	7.70E-01
	634	8.40E-01	8.20E-01	8.10E-01	8.00E-01	8.00E-01	8.00E-01	8.20E-01
	635	8.00E-01	7.80E-01	7.80E-01	7.80E-01	7.70E-01	7.80E-01	7.70E-01
	636	7.80E-01	7.70E-01	7.70E-01	7.50E-01	7.40E-01	7.60E-01	7.50E-01
	637	8.70E-01	8.40E-01	8.30E-01	8.30E-01	8.30E-01	8.50E-01	8.30E-01
	MINIMUM	7.70E-01	7.70E-01	7.70E-01	7.50E-01	7.40E-01	7.60E-01	7.50E-01
	MEAN	8.12E-01	7.96E-01	7.92E-01	7.84E-01	7.78E-01	7.90E-01	7.88E-01
	MAXIMUM	8.70E-01	8.40E-01	8.30E-01	8.30E-01	8.30E-01	8.50E-01	8.30E-01
	+P 99/90	1.01E+00	9.46E-01	9.17E-01	9.34E-01	9.51E-01	9.65E-01	9.51E-01
	-P 99/90	6.16E-01	6.46E-01	6.67E-01	6.34E-01	6.05E-01	6.15E-01	6.25E-01
	SIGMA	4.21E-02	3.21E-02	2.68E-02	3.21E-02	3.70E-02	3.74E-02	3.49E-02

SUPPLY CURRENT		(mA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N		-----						
CONTROL	623		6.00E-02	4.00E-02	5.00E-02	5.00E-02	5.00E-02	5.00E-02
	633		0.00E+00	0.00E+00	-1.00E-02	-2.00E-02	-1.00E-02	0.00E+00
	634		-2.00E-02	-3.00E-02	-4.00E-02	-4.00E-02	-4.00E-02	-2.00E-02
	635		-2.00E-02	-2.00E-02	-2.00E-02	-3.00E-02	-2.00E-02	-3.00E-02
	636		-1.00E-02	-1.00E-02	-3.00E-02	-4.00E-02	-2.00E-02	-3.00E-02
	637		-3.00E-02	-4.00E-02	-4.00E-02	-4.00E-02	-2.00E-02	-4.00E-02
	MINIMUM		-3.00E-02	-4.00E-02	-4.00E-02	-4.00E-02	-4.00E-02	-4.00E-02
	MEAN		-1.60E-02	-2.00E-02	-2.80E-02	-3.40E-02	-2.20E-02	-2.40E-02
	MAXIMUM		0.00E+00	0.00E+00	-1.00E-02	-2.00E-02	-1.00E-02	0.00E+00
	+P 99/90		3.72E-02	5.38E-02	3.28E-02	7.73E-03	2.91E-02	4.68E-02
	-P 99/90		-6.92E-02	-9.38E-02	-8.88E-02	-7.57E-02	-7.31E-02	-9.48E-02
	SIGMA		1.14E-02	1.58E-02	1.30E-02	8.94E-03	1.10E-02	1.52E-02

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

OUTPUT VOLTAGE		(V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00	4.997E+00
	633	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	634	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	635	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	636	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.002E+00	5.002E+00
	637	4.999E+00	5.000E+00	5.001E+00	5.002E+00	5.002E+00	5.002E+00	5.001E+00
	MINIMUM	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	MEAN	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.001E+00
	MAXIMUM	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.002E+00	5.002E+00	5.002E+00
	+P 99/90	5.000E+00	5.001E+00	5.001E+00	5.002E+00	5.003E+00	5.003E+00	5.002E+00
	-P 99/90	4.998E+00	4.999E+00	5.000E+00	5.001E+00	5.001E+00	5.001E+00	5.000E+00
	SIGMA	2.168E-04	2.168E-04	1.342E-04	1.817E-04	1.817E-04	2.074E-04	1.924E-04

OUTPUT VOLTAGE		(V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623		3.000E-04	4.000E-04	3.000E-04	4.000E-04	1.000E-04	5.000E-04
	633		1.100E-03	1.700E-03	2.200E-03	2.800E-03	2.400E-03	1.900E-03
	634		8.000E-04	1.500E-03	2.000E-03	2.600E-03	2.300E-03	1.800E-03
	635		1.100E-03	1.800E-03	2.500E-03	3.200E-03	3.000E-03	2.400E-03
	636		1.000E-03	1.500E-03	2.200E-03	2.800E-03	2.500E-03	2.000E-03
	637		1.000E-03	1.600E-03	2.200E-03	2.800E-03	2.500E-03	1.900E-03
	MINIMUM		8.000E-04	1.500E-03	2.000E-03	2.600E-03	2.300E-03	1.800E-03
	MEAN		1.000E-03	1.620E-03	2.220E-03	2.840E-03	2.540E-03	2.000E-03
	MAXIMUM		1.100E-03	1.800E-03	2.500E-03	3.200E-03	3.000E-03	2.400E-03
	+P 99/90		1.571E-03	2.228E-03	3.055E-03	3.862E-03	3.801E-03	3.094E-03
	-P 99/90		4.285E-04	1.012E-03	1.385E-03	1.818E-03	1.279E-03	9.057E-04
	SIGMA		1.225E-04	1.304E-04	1.789E-04	2.191E-04	2.702E-04	2.345E-04

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
 RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
 LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

LINE REGULATION 7.2V TO 10V		(ppm/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623	2.30E+00	-4.60E-01	-1.80E+00	1.52E+00	1.41E+00	1.60E-01	2.51E+00
	633	3.38E+00	-2.04E+00	3.90E-01	-1.43E+00	-2.63E+00	-2.36E+00	-1.25E+00
	634	7.20E-01	3.00E-01	-2.11E+00	-3.00E-01	-1.49E+00	-8.00E-02	-1.52E+00
	635	3.22E+00	2.14E+00	-1.32E+00	-4.70E+00	-7.94E+00	-1.35E+00	-2.35E+00
	636	8.80E-01	8.00E-01	-8.90E-01	8.40E-01	1.33E+00	-1.05E+00	-2.71E+00
	637	-2.53E+00	-3.80E-01	-2.20E-01	1.33E+00	-3.05E+00	-1.26E+00	-6.60E-01
	MINIMUM	-2.53E+00	-2.04E+00	-2.11E+00	-4.70E+00	-7.94E+00	-2.36E+00	-2.71E+00
	MEAN	1.13E+00	1.64E-01	-8.30E-01	-8.52E-01	-2.76E+00	-1.22E+00	-1.70E+00
	MAXIMUM	3.38E+00	2.14E+00	3.90E-01	1.33E+00	1.33E+00	-8.00E-02	-6.60E-01
	+P 99/90	1.23E+01	7.35E+00	3.68E+00	1.04E+01	1.29E+01	2.58E+00	2.18E+00
	-P 99/90	-1.01E+01	-7.02E+00	-5.34E+00	-1.21E+01	-1.85E+01	-5.02E+00	-5.57E+00
	SIGMA	2.40E+00	1.54E+00	9.67E-01	2.40E+00	3.36E+00	8.13E-01	8.31E-01

LINE REGULATION 7.2V TO 10V		(ppm/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623		-2.76E+00	-4.10E+00	-7.80E-01	-8.90E-01	-2.14E+00	2.10E-01
	633		-5.42E+00	-2.99E+00	-4.81E+00	-6.01E+00	-5.74E+00	-4.63E+00
	634		-4.20E-01	-2.83E+00	-1.02E+00	-2.21E+00	-8.00E-01	-2.24E+00
	635		-1.08E+00	-4.54E+00	-7.92E+00	-1.12E+01	-4.57E+00	-5.57E+00
	636		-8.00E-02	-1.77E+00	-4.00E-02	4.50E-01	-1.93E+00	-3.59E+00
	637		2.15E+00	2.31E+00	3.86E+00	-5.20E-01	1.27E+00	1.87E+00
	MINIMUM		-5.42E+00	-4.54E+00	-7.92E+00	-1.12E+01	-5.74E+00	-5.57E+00
	MEAN		-9.70E-01	-1.96E+00	-1.99E+00	-3.89E+00	-2.35E+00	-2.83E+00
	MAXIMUM		2.15E+00	2.31E+00	3.86E+00	4.50E-01	1.27E+00	1.87E+00
	+P 99/90		1.19E+01	1.01E+01	1.92E+01	1.83E+01	1.09E+01	1.07E+01
	-P 99/90		-1.39E+01	-1.40E+01	-2.31E+01	-2.61E+01	-1.56E+01	-1.64E+01
	SIGMA		2.77E+00	2.59E+00	4.53E+00	4.75E+00	2.83E+00	2.91E+00

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

LINE REGULATION 10V TO 40V		(ppm/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623	-2.20E-01	-2.50E-01	0.00E+00	2.00E-02	-3.00E-02	-9.00E-02	-5.00E-02
	633	8.00E-02	2.80E-01	3.80E-01	6.60E-01	8.40E-01	9.00E-01	4.20E-01
	634	-2.00E-01	1.60E-01	6.00E-02	3.10E-01	5.20E-01	5.40E-01	3.50E-01
	635	4.10E-01	2.10E-01	3.70E-01	2.80E-01	8.00E-01	8.30E-01	4.80E-01
	636	-3.00E-02	3.00E-02	2.30E-01	3.20E-01	9.60E-01	6.80E-01	4.10E-01
	637	9.00E-02	-3.00E-02	3.20E-01	4.60E-01	5.40E-01	5.00E-01	4.20E-01
	MINIMUM	-2.00E-01	-3.00E-02	6.00E-02	2.80E-01	5.20E-01	5.00E-01	3.50E-01
	MEAN	7.00E-02	1.30E-01	2.72E-01	4.06E-01	7.32E-01	6.90E-01	4.16E-01
	MAXIMUM	4.10E-01	2.80E-01	3.80E-01	6.60E-01	9.60E-01	9.00E-01	4.80E-01
	+P 99/90	1.11E+00	7.27E-01	8.90E-01	1.14E+00	1.64E+00	1.51E+00	6.31E-01
	-P 99/90	-9.71E-01	-4.67E-01	-3.46E-01	-3.31E-01	-1.72E-01	-1.26E-01	2.01E-01
	SIGMA	2.23E-01	1.28E-01	1.33E-01	1.58E-01	1.94E-01	1.75E-01	4.62E-02

LINE REGULATION 10V TO 40V		(ppm/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623		-3.00E-02	2.20E-01	2.40E-01	1.90E-01	1.30E-01	1.70E-01
	633		2.00E-01	3.00E-01	5.80E-01	7.60E-01	8.20E-01	3.40E-01
	634		3.60E-01	2.60E-01	5.10E-01	7.20E-01	7.40E-01	5.50E-01
	635		-2.00E-01	-4.00E-02	-1.30E-01	3.90E-01	4.20E-01	7.00E-02
	636		6.00E-02	2.60E-01	3.50E-01	9.90E-01	7.10E-01	4.40E-01
	637		-1.20E-01	2.30E-01	3.70E-01	4.50E-01	4.10E-01	3.30E-01
	MINIMUM		-2.00E-01	-4.00E-02	-1.30E-01	3.90E-01	4.10E-01	7.00E-02
	MEAN		6.00E-02	2.02E-01	3.36E-01	6.62E-01	6.20E-01	3.46E-01
	MAXIMUM		3.60E-01	3.00E-01	5.80E-01	9.90E-01	8.20E-01	5.50E-01
	+P 99/90		1.13E+00	8.44E-01	1.63E+00	1.80E+00	1.51E+00	1.18E+00
	-P 99/90		-1.01E+00	-4.40E-01	-9.59E-01	-4.80E-01	-2.73E-01	-4.85E-01
	SIGMA		2.29E-01	1.38E-01	2.78E-01	2.45E-01	1.91E-01	1.78E-01

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

LOAD REGULATION SOURCING		ppm/mA						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623	-1.25E+01	-1.26E+01	-1.21E+01	-1.24E+01	-1.28E+01	-1.25E+01	-1.33E+01
	633	-1.25E+01	-1.21E+01	-1.28E+01	-1.31E+01	-1.23E+01	-1.19E+01	-1.29E+01
	634	-1.31E+01	-1.32E+01	-1.27E+01	-1.27E+01	-1.31E+01	-1.30E+01	-1.33E+01
	635	-1.24E+01	-1.34E+01	-1.35E+01	-1.36E+01	-1.34E+01	-1.30E+01	-1.31E+01
	636	-1.39E+01	-1.45E+01	-1.27E+01	-1.49E+01	-1.29E+01	-1.32E+01	-1.28E+01
	637	-1.26E+01	-1.32E+01	-1.33E+01	-1.44E+01	-1.40E+01	-1.32E+01	-1.37E+01
	MINIMUM	-1.39E+01	-1.45E+01	-1.35E+01	-1.49E+01	-1.40E+01	-1.32E+01	-1.37E+01
	MEAN	-1.29E+01	-1.33E+01	-1.30E+01	-1.37E+01	-1.31E+01	-1.29E+01	-1.32E+01
	MAXIMUM	-1.24E+01	-1.21E+01	-1.27E+01	-1.27E+01	-1.23E+01	-1.19E+01	-1.28E+01
	+P 99/90	-1.01E+01	-9.31E+00	-1.12E+01	-9.62E+00	-1.03E+01	-1.04E+01	-1.15E+01
	-P 99/90	-1.57E+01	-1.72E+01	-1.48E+01	-1.78E+01	-1.60E+01	-1.54E+01	-1.48E+01
	SIGMA	6.10E-01	8.46E-01	3.82E-01	8.82E-01	6.05E-01	5.33E-01	3.58E-01

LOAD REGULATION SOURCING		ppm/mA				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623		-6.00E-02	4.80E-01	1.90E-01	-2.40E-01	5.00E-02	-7.30E-01
	633		4.30E-01	-3.00E-01	-5.80E-01	2.10E-01	6.00E-01	-3.20E-01
	634		-8.00E-02	4.20E-01	4.00E-01	5.00E-02	1.20E-01	-2.00E-01
	635		-9.50E-01	-1.12E+00	-1.21E+00	-1.01E+00	-6.10E-01	-7.20E-01
	636		-6.00E-01	1.18E+00	-9.80E-01	9.50E-01	6.70E-01	1.04E+00
	637		-5.90E-01	-7.20E-01	-1.80E+00	-1.39E+00	-6.20E-01	-1.14E+00
	MINIMUM		-9.50E-01	-1.12E+00	-1.80E+00	-1.39E+00	-6.20E-01	-1.14E+00
	MEAN		-3.58E-01	-1.08E-01	-8.34E-01	-2.38E-01	3.20E-02	-2.68E-01
	MAXIMUM		4.30E-01	1.18E+00	4.00E-01	9.50E-01	6.70E-01	1.04E+00
	+P 99/90		2.16E+00	4.18E+00	2.99E+00	4.20E+00	2.96E+00	3.55E+00
	-P 99/90		-2.87E+00	-4.39E+00	-4.66E+00	-4.68E+00	-2.90E+00	-4.09E+00
	SIGMA		5.39E-01	9.18E-01	8.19E-01	9.51E-01	6.27E-01	8.19E-01

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED

LOAD REGULATION SINKING		ppm/mA						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623	5.77E+01	5.86E+01	5.87E+01	5.75E+01	5.86E+01	5.75E+01	5.73E+01
	633	5.85E+01	6.03E+01	6.19E+01	6.07E+01	6.22E+01	5.97E+01	5.95E+01
	634	5.85E+01	6.07E+01	6.18E+01	6.22E+01	6.27E+01	5.95E+01	6.23E+01
	635	5.67E+01	5.89E+01	5.87E+01	5.95E+01	6.11E+01	5.94E+01	5.91E+01
	636	5.94E+01	6.07E+01	6.05E+01	6.41E+01	6.31E+01	6.22E+01	6.07E+01
	637	5.97E+01	6.24E+01	6.17E+01	6.27E+01	6.40E+01	6.30E+01	6.14E+01
	MINIMUM	5.67E+01	5.89E+01	5.87E+01	5.95E+01	6.11E+01	5.94E+01	5.91E+01
	MEAN	5.86E+01	6.06E+01	6.09E+01	6.18E+01	6.26E+01	6.08E+01	6.06E+01
	MAXIMUM	5.97E+01	6.24E+01	6.19E+01	6.41E+01	6.40E+01	6.30E+01	6.23E+01
	+P 99/90	6.40E+01	6.64E+01	6.73E+01	7.02E+01	6.76E+01	6.87E+01	6.68E+01
	-P 99/90	5.31E+01	5.48E+01	5.46E+01	5.34E+01	5.76E+01	5.29E+01	5.43E+01
	SIGMA	1.17E+00	1.24E+00	1.36E+00	1.80E+00	1.08E+00	1.69E+00	1.34E+00

LOAD REGULATION SINKING		ppm/mA				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		5.00E+01	5.00E+01	5.00E+01	5.00E+01	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
----- S/N -----								
CONTROL	623		9.20E-01	9.40E-01	-1.70E-01	8.60E-01	-2.10E-01	-4.40E-01
	633		1.78E+00	3.46E+00	2.17E+00	3.75E+00	1.21E+00	9.70E-01
	634		2.19E+00	3.27E+00	3.75E+00	4.18E+00	1.02E+00	3.80E+00
	635		2.21E+00	1.99E+00	2.72E+00	4.34E+00	2.71E+00	2.33E+00
	636		1.29E+00	1.10E+00	4.64E+00	3.73E+00	2.81E+00	1.25E+00
	637		2.68E+00	2.00E+00	2.97E+00	4.24E+00	3.23E+00	1.67E+00
	MINIMUM		1.29E+00	1.10E+00	2.17E+00	3.73E+00	1.02E+00	9.70E-01
	MEAN		2.03E+00	2.36E+00	3.25E+00	4.05E+00	2.20E+00	2.00E+00
	MAXIMUM		2.68E+00	3.46E+00	4.64E+00	4.34E+00	3.23E+00	3.80E+00
	+P 99/90		4.47E+00	6.97E+00	7.74E+00	5.39E+00	6.90E+00	7.26E+00
	-P 99/90		-4.06E-01	-2.24E+00	-1.24E+00	2.71E+00	-2.51E+00	-3.25E+00
	SIGMA		5.22E-01	9.86E-01	9.63E-01	2.87E-01	1.01E+00	1.13E+00

DEVICE TYPE: RH1021CMH-5 5 VOLT REFERENCE (LTC) UNBIASED
RADIATION SOURCE: SHEPHERD 484 (Co60), 1.25MeV

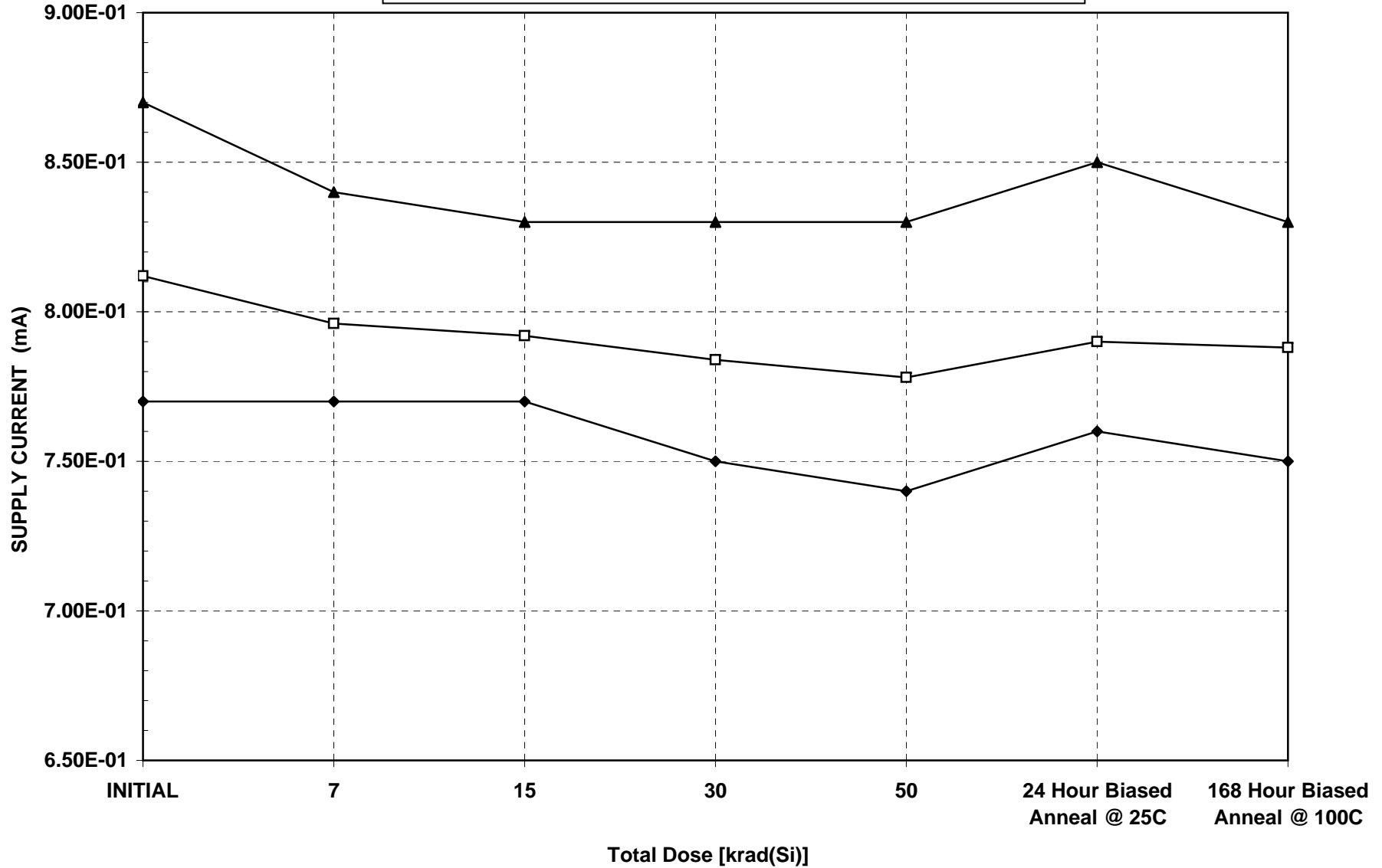
D/C 0617B || PACKAGE TO-5 || LOT# 384568.2
LOG# 1589 || TEST DATE 8-02-07 || RTP# 688
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

IC S Radiation Test Results Log # 1589 8/02/07

SUPPLY CURRENT (mA)

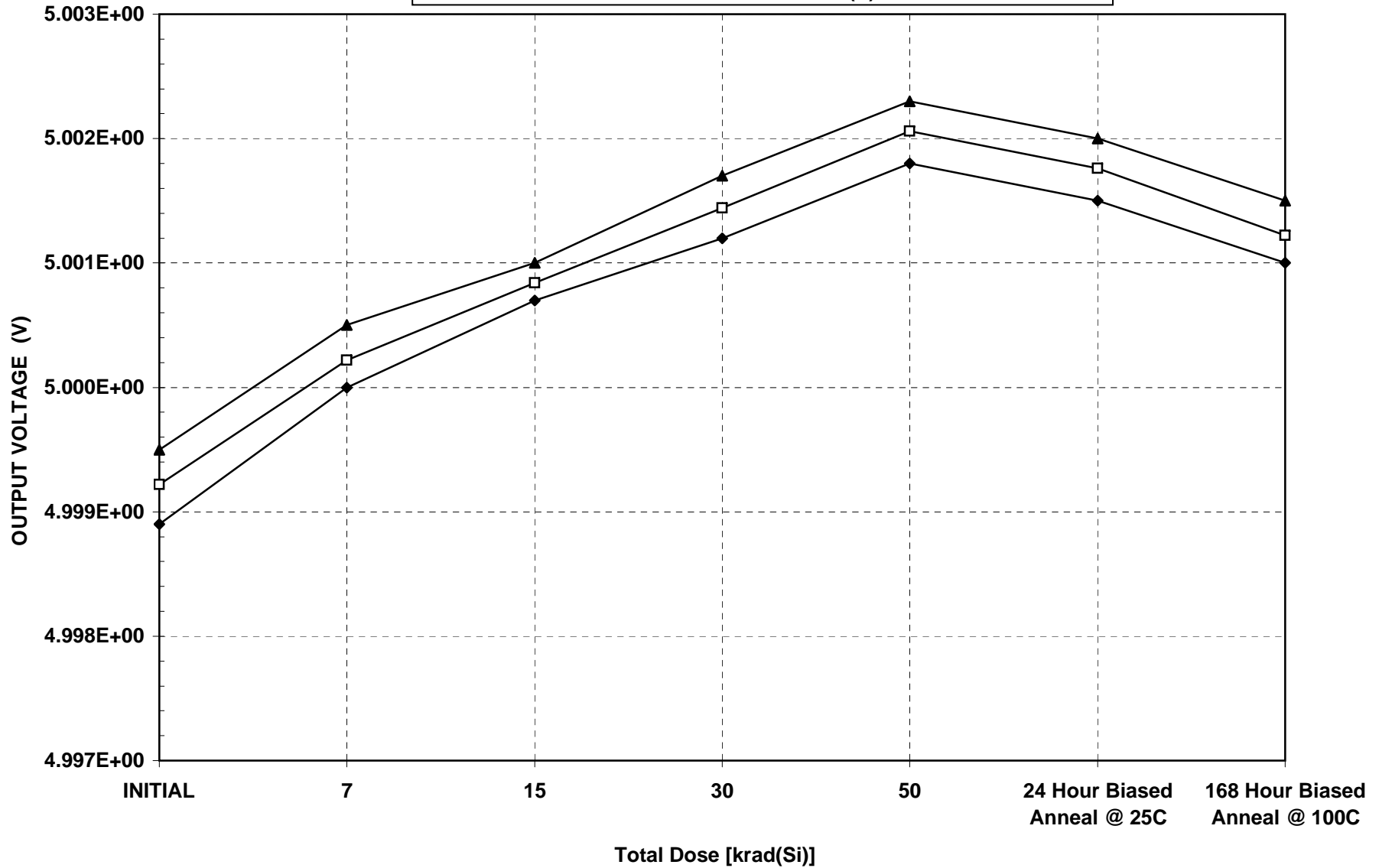


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

I C S Radiation Test Results Log # 1589 8/02/07

OUTPUT VOLTAGE (V)

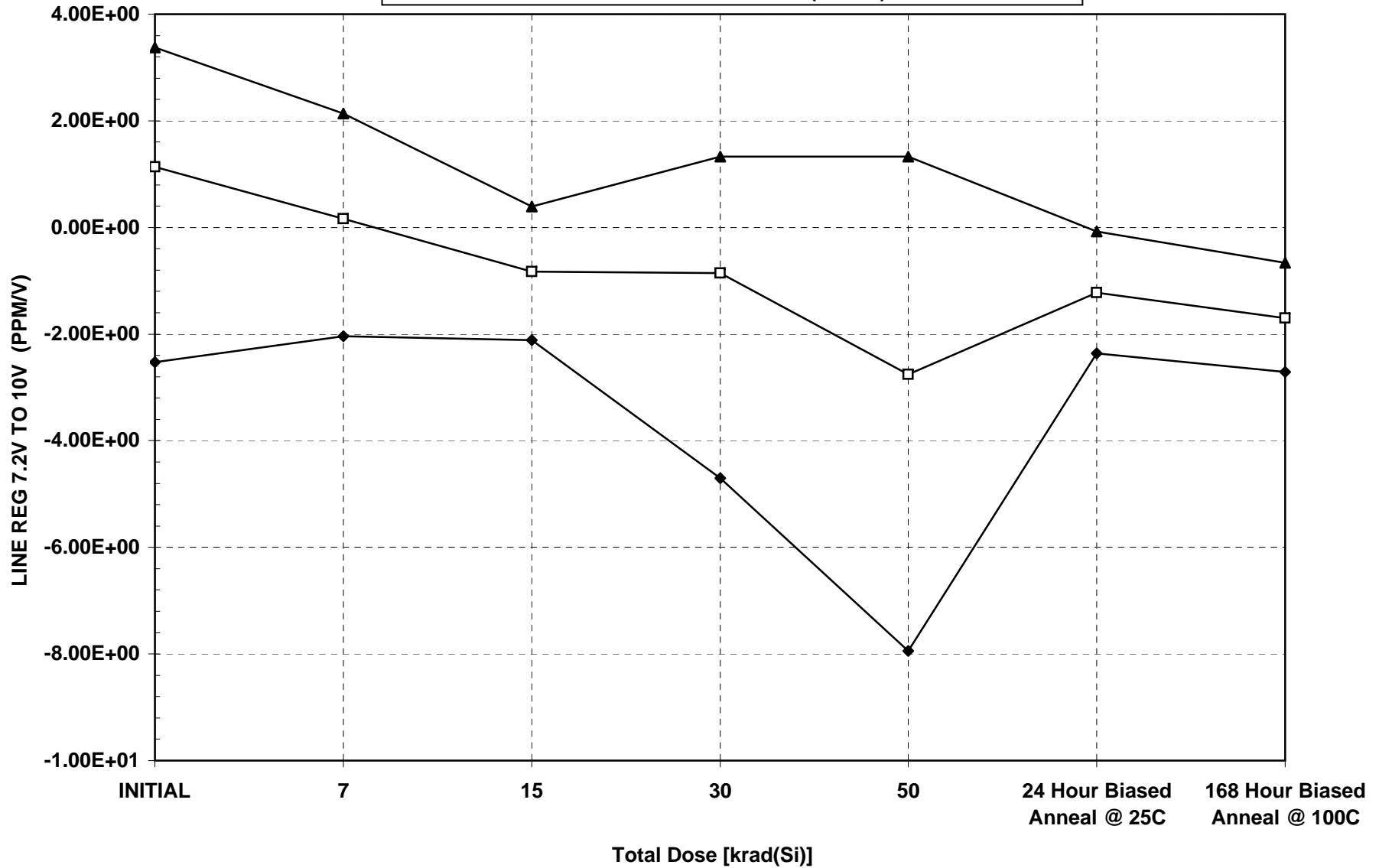


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

IC S Radiation Test Results Log # 1589 8/02/07

LINE REG 7.2V TO 10V (PPM/V)

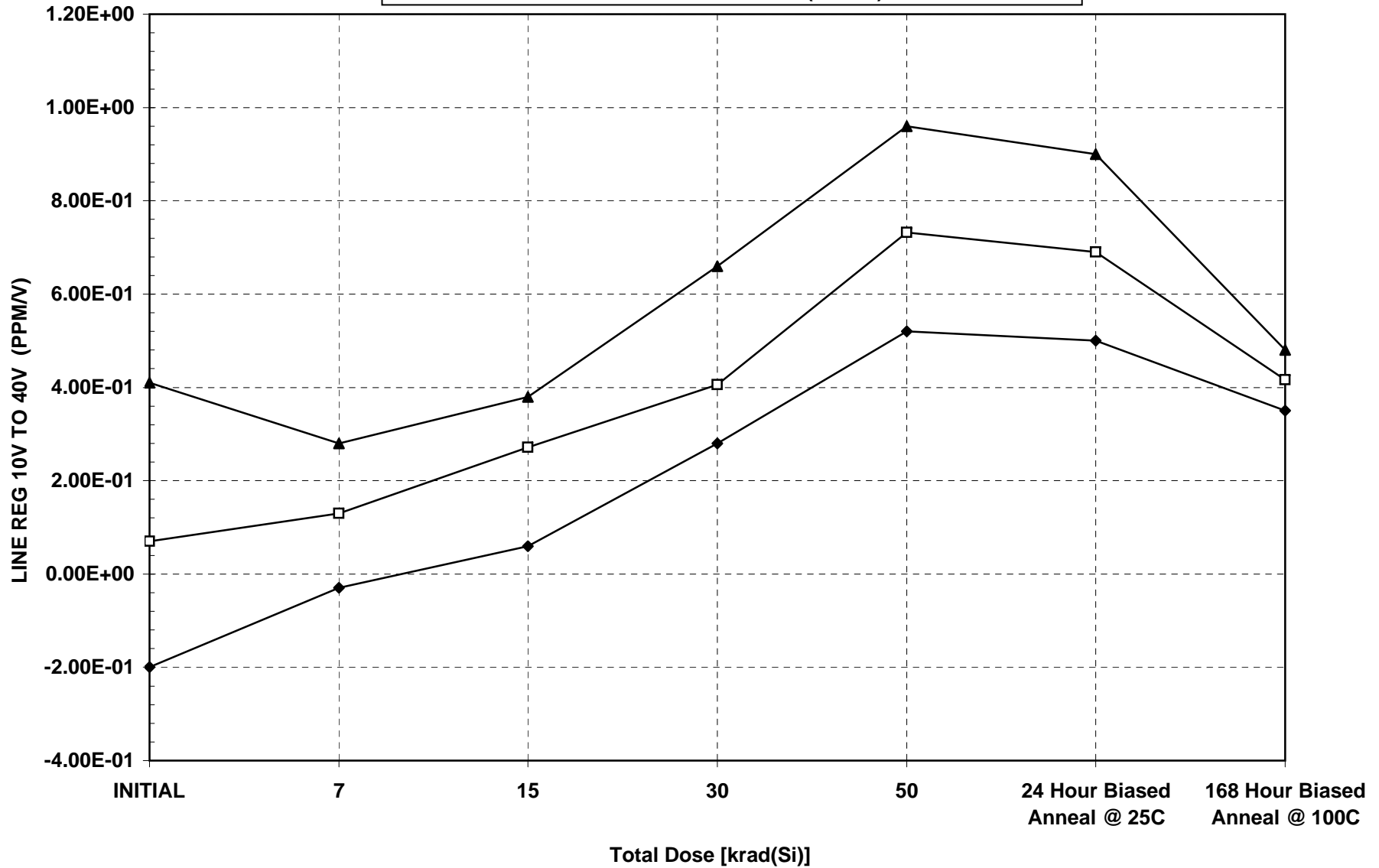


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

IC S Radiation Test Results Log # 1589 8/02/07

LINE REG 10V TO 40V (PPM/V)

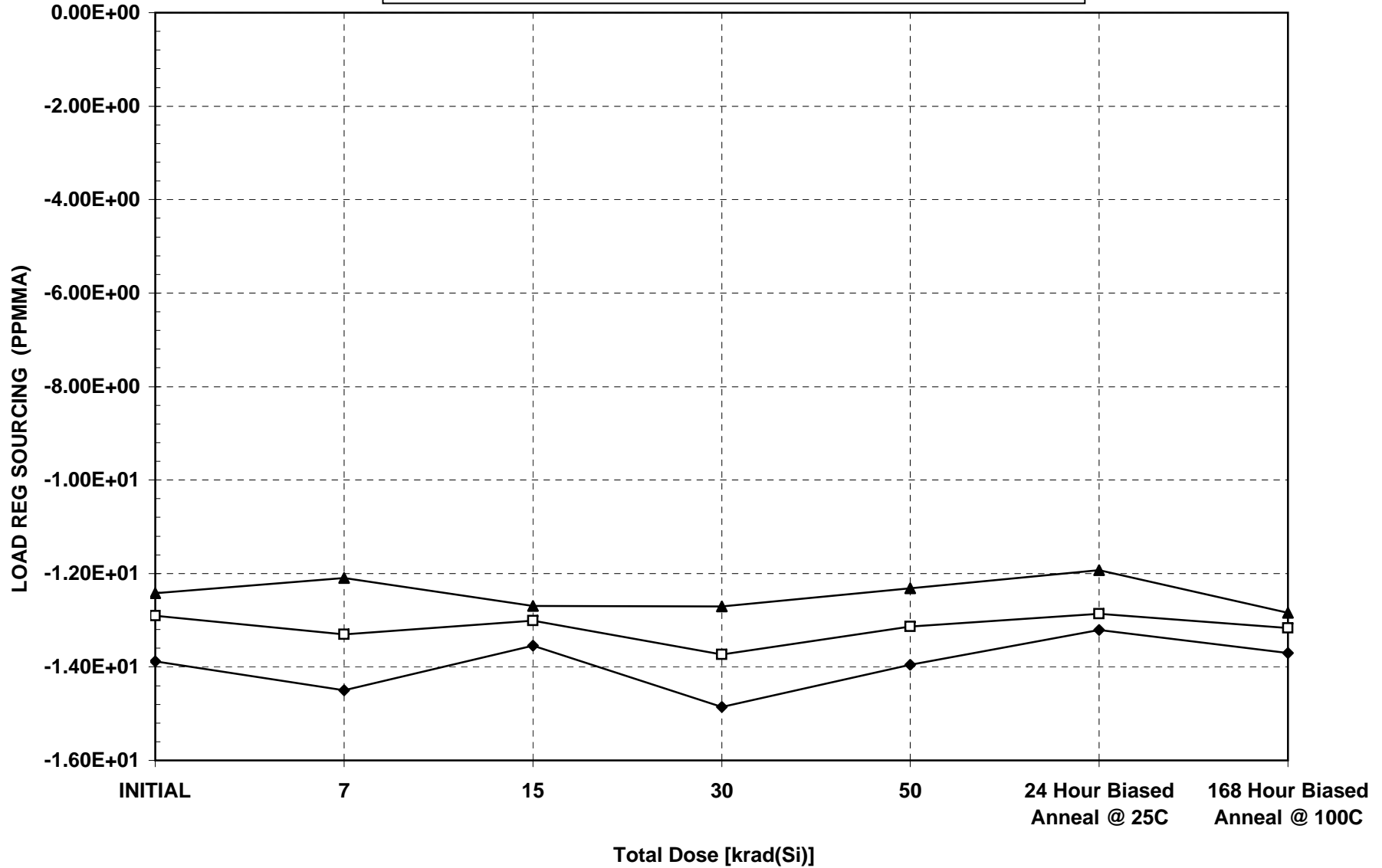


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

IC S Radiation Test Results Log # 1589 8/02/07

LOAD REG SOURCING (PPMMA)



◆ MINIMUM

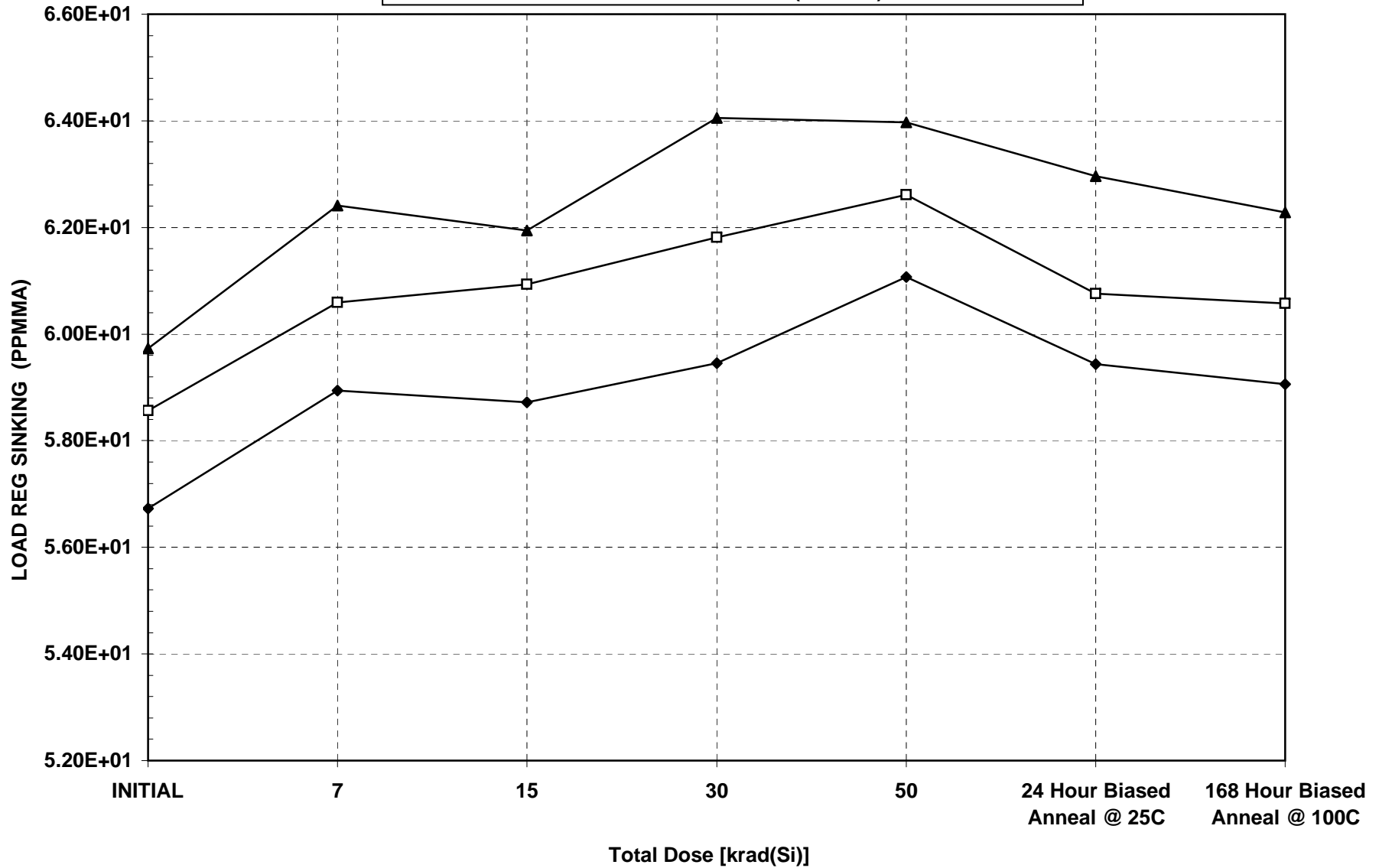
□ MEAN

▲ MAXIMUM

RH11021CMH-5 5V REFERENCE (LTC) UNBIASED

IC S Radiation Test Results Log # 1589 8/02/07

LOAD REG SINKING (PPMMA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

ICS Radiation Test Results

**RH1021CMH-5
5V REFFERENCE (BIASED)
LINEAR TECHNOLOGY CORPORATION
P.O. # 46026L**

.....
.
. DEVICE TYPE: RH1021CMH-5 5V REFERENCE .
. LINEAR TECHNOLOGY CORPORATION .
. RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV .
.....

. D/C 0617B || PACKAGE 8-LEAD CAN || LOT# 384568.2 .
. LOG# 1590 || TEST DATE 05/24/07 || RTP# 694 .
. P.O.# 46026L .
.....

. Test Conductor: A.J. Kenna .
. Test Administrator: Dr. Michael K. Gauthier .
.....

**ICS RADIATION TECHNOLOGIES, INC.
8416 Florence Ave, Suite 207
Downey, CA 90240-3949**

**TEL: 800-297-8688
TEL: 562-923-1837
FAX: 562-923-3609**

**INTERNET e-mail: support@icsrad.com
www.icsrad.com**

Radiation Test Results

RH1021CMH-5
5 Volt Reference
Linear Technology Corporation
D/C 0617B, Lot# 384568.2
Test Date 05-24-07
Log# 1590 and 1591, ELDRS Test
P.O.# 46026L

This test consisted of two test logs, Logs 1590 and 1591. The test was to compare the radiation effects differences between two bias conditions: Log 1590, +30 volts and Log 1591 which had all leads grounded. The six test requirements are stated in test procedure RTP 694, dated March 23, 2007.

There was very little difference noted between the two bias conditions for all parameters tested. The test results of the two tests (both bias conditions) were less than the LTC data sheet limits of 20krad(Si) at the 50krad(Si) test level.

These lots **PASSED** the six test requirements as stated in the Radiation Test Procedure RTP 694, dated March 23, 2007.

TID BIASED DEVICES, Log 1590

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.78mA. The maximum current was 0.80mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.001V. The maximum voltage was 5.003V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -2.72ppm/V. The parameter maximum was 0.08ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.22ppm/V. The parameter maximum was 2.67ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -13.9ppm/mA. The parameter maximum was -12.8ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 56.7ppm/mA. The parameter maximum was 63.3ppm/mA.

TID GROUNDED DEVICES, Log 1591

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.75mA. The maximum current was 0.81mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.000V. The maximum voltage was 5.002V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -3.55ppm/V. The parameter maximum was -0.96ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.74ppm/V. The parameter maximum was 1.36ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -14.1ppm/mA. The parameter maximum was -12.4ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 58.6ppm/mA. The parameter maximum was 65.1ppm/mA.

ANOMOLIES:

1. There were no device anomalies during this test.

If you should require any further clarification on this matter, please contact me directly: TEL-562-923-1837, FAX-562-923-3609, or E-Mail mike@icsrad.com.

ICS Radiation Technologies, Inc.

Dr. Michael K. Gauthier, P.E.
President
August 10, 2007

March 23, 2007

RADIATION TEST PROCEDURE

No. 694

Device Type: RH1021CMH-5 5 Volt REFERENCE
Manufacturer: Linear Technology Corp.

TEST	TEST NAME	TEST CONDITIONS	Limits				Units
			Exposure Levels rad(Si)				
			20k	50k	100k	200k	
1	Supply Current		1.2	1.2	1.2	1.2	mA Max
2	Output Voltage		4.993 5.007	4.991 5.009	4.9875 5.0125	4.984 5.016	V Min V Max
3	Line Regulation	$7.2V \leq V_{in} \leq 10V$	12	13.5	15	18	ppm/V Max
4	Line Regulation	$10V \leq V_{in} \leq 40V$	6	6	7	9	ppm/V Max
5	Load Regulation Source	$0 \leq I_{out} \leq 10mA$	20	20	20	20	ppm/mA Max
6	Load Regulation Sink	$0 \leq I_{out} \leq 10mA$	100	100	100	100	ppm/mA Max

Measurements shall be made at room (ambient) temperature.

Test conducted using an Analog Devices LTS-2020 Component Test System, with the LTS-2101 Family Board, LTS0600/0604 Socket Assembly, LTS0325/RH1021-5 DUT board, RH1021 BGSS030309.

Software: RH1021-5. "RH1021-5.SRC"

Data Processing use King Program: P99/90 Ktl =4.666 for 5 devices

Return samples to customer.

I C S Radiation Test Results
RH1021CMH-5 (LTC) "BIASED"

SUPPLY CURRENT		(mA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624	8.10E-01	7.90E-01	8.00E-01	8.00E-01	8.10E-01	8.00E-01	8.10E-01
	638	8.10E-01	7.90E-01	7.90E-01	7.80E-01	7.80E-01	7.70E-01	7.90E-01
	639	8.10E-01	8.10E-01	8.00E-01	7.90E-01	8.00E-01	8.10E-01	8.10E-01
	640	8.20E-01	8.00E-01	8.00E-01	7.90E-01	7.90E-01	7.90E-01	8.10E-01
	641	8.30E-01	8.10E-01	8.10E-01	8.10E-01	8.00E-01	8.00E-01	8.20E-01
	642	8.00E-01	7.90E-01	7.90E-01	7.90E-01	7.80E-01	7.90E-01	8.00E-01
	MINIMUM	8.00E-01	7.90E-01	7.90E-01	7.80E-01	7.80E-01	7.70E-01	7.90E-01
	MEAN	8.14E-01	8.00E-01	7.98E-01	7.92E-01	7.90E-01	7.92E-01	8.06E-01
	MAXIMUM	8.30E-01	8.10E-01	8.10E-01	8.10E-01	8.00E-01	8.10E-01	8.20E-01
	+P 99/90	8.67E-01	8.42E-01	8.33E-01	8.38E-01	8.32E-01	8.55E-01	8.54E-01
	-P 99/90	7.61E-01	7.58E-01	7.63E-01	7.46E-01	7.48E-01	7.29E-01	7.58E-01
	SIGMA	1.14E-02	1.00E-02	8.37E-03	1.10E-02	1.00E-02	1.48E-02	1.14E-02

SUPPLY CURRENT		(mA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624		-2.00E-02	-1.00E-02	-1.00E-02	0.00E+00	-1.00E-02	0.00E+00
	638		-2.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-4.00E-02	-2.00E-02
	639		0.00E+00	-1.00E-02	-2.00E-02	-1.00E-02	0.00E+00	0.00E+00
	640		-2.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-3.00E-02	-1.00E-02
	641		-2.00E-02	-2.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-1.00E-02
	642		-1.00E-02	-1.00E-02	-1.00E-02	-2.00E-02	-1.00E-02	0.00E+00
	MINIMUM		-2.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-4.00E-02	-2.00E-02
	MEAN		-1.40E-02	-1.60E-02	-2.20E-02	-2.40E-02	-2.20E-02	-8.00E-03
	MAXIMUM		0.00E+00	-1.00E-02	-1.00E-02	-1.00E-02	0.00E+00	0.00E+00
	+P 99/90		2.39E-02	7.23E-03	1.35E-02	1.39E-02	4.77E-02	2.75E-02
	-P 99/90		-5.19E-02	-3.92E-02	-5.75E-02	-6.19E-02	-9.17E-02	-4.35E-02
	SIGMA		8.94E-03	5.48E-03	8.37E-03	8.94E-03	1.64E-02	8.37E-03

DEVICE TYPE: RH1021CMH-5 VOLT REFERENCE (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 LEAD TO-5 || LOT# 384568.2
 LOG# 1590 || TEST DATE 05/24/07 || RTP# 694
 P.O.# 46026L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 (LTC) "BIASED"

OUTPUT VOLTAGE		(V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624	4.997E+00	4.997E+00	4.999E+00	4.997E+00	4.997E+00	4.997E+00	4.996E+00
	638	5.000E+00	5.001E+00	5.004E+00	5.003E+00	5.003E+00	5.004E+00	5.002E+00
	639	4.999E+00	5.001E+00	5.004E+00	5.002E+00	5.002E+00	5.003E+00	5.001E+00
	640	4.998E+00	4.999E+00	5.002E+00	5.001E+00	5.001E+00	5.001E+00	4.999E+00
	641	4.998E+00	4.999E+00	5.002E+00	5.001E+00	5.001E+00	5.002E+00	5.000E+00
	642	5.000E+00	5.001E+00	5.004E+00	5.003E+00	5.003E+00	5.003E+00	5.002E+00
	MINIMUM	4.998E+00	4.999E+00	5.002E+00	5.001E+00	5.001E+00	5.001E+00	4.999E+00
	MEAN	4.999E+00	5.000E+00	5.003E+00	5.002E+00	5.002E+00	5.002E+00	5.001E+00
	MAXIMUM	5.000E+00	5.001E+00	5.004E+00	5.003E+00	5.003E+00	5.004E+00	5.002E+00
	+P 99/90	5.003E+00	5.005E+00	5.008E+00	5.006E+00	5.006E+00	5.007E+00	5.005E+00
	-P 99/90	4.994E+00	4.995E+00	4.998E+00	4.997E+00	4.998E+00	4.998E+00	4.996E+00
	SIGMA	1.067E-03	1.130E-03	1.130E-03	1.067E-03	1.036E-03	1.050E-03	1.026E-03

OUTPUT VOLTAGE		(V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624		3.000E-04	2.300E-03	2.000E-04	-4.000E-04	1.000E-04	-6.000E-04
	638		1.400E-03	4.300E-03	3.000E-03	3.100E-03	3.700E-03	1.900E-03
	639		1.400E-03	4.200E-03	3.000E-03	3.000E-03	3.600E-03	1.900E-03
	640		1.300E-03	4.100E-03	3.000E-03	3.100E-03	3.600E-03	1.900E-03
	641		1.100E-03	4.000E-03	3.000E-03	3.200E-03	3.700E-03	2.000E-03
	642		1.200E-03	4.000E-03	3.000E-03	3.100E-03	3.500E-03	1.800E-03
	MINIMUM		1.100E-03	4.000E-03	3.000E-03	3.000E-03	3.500E-03	1.800E-03
	MEAN		1.280E-03	4.120E-03	3.000E-03	3.100E-03	3.620E-03	1.900E-03
	MAXIMUM		1.400E-03	4.300E-03	3.000E-03	3.200E-03	3.700E-03	2.000E-03
	+P 99/90		1.833E-03	4.673E-03	3.000E-03	3.400E-03	3.975E-03	2.200E-03
	-P 99/90		7.269E-04	3.567E-03	3.000E-03	2.800E-03	3.265E-03	1.600E-03
	SIGMA		1.304E-04	1.304E-04	0.000E+00	7.071E-05	8.367E-05	7.071E-05

DEVICE TYPE: RH1021CMH-5 VOLT REFERENCE (LTC)
RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 LEAD TO-5 || LOT# 384568.2
 LOG# 1590 || TEST DATE 05/24/07 || RTP# 694
 P.O.# 46026L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 (LTC) "BIASED"

LINE REGULATION 7.2V TO 10V		(PPM/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624	2.02E+00	-4.30E-01	1.88E+00	5.60E-01	4.30E-01	-3.30E-01	3.00E-02
	638	-1.40E-01	-2.74E+00	-8.30E-01	-3.20E-01	8.00E-02	-2.81E+00	-3.34E+00
	639	7.80E-01	3.00E-01	-2.80E-01	-8.60E-01	-1.16E+00	-2.48E+00	-1.28E+00
	640	-8.90E-01	1.09E+00	2.40E-01	-7.60E-01	-2.72E+00	-3.08E+00	-1.91E+00
	641	1.78E+00	-2.20E+00	2.19E+00	1.62E+00	-9.90E-01	-4.44E+00	-4.18E+00
	642	3.60E-01	4.40E-01	-1.86E+00	3.70E-01	-1.99E+00	-2.56E+00	-3.61E+00
	MINIMUM	-8.90E-01	-2.74E+00	-1.86E+00	-8.60E-01	-2.72E+00	-4.44E+00	-4.18E+00
	MEAN	3.78E-01	-6.22E-01	7.25E-02	1.00E-02	-1.36E+00	-3.07E+00	-2.86E+00
	MAXIMUM	1.78E+00	1.09E+00	2.19E+00	1.62E+00	8.00E-02	-2.48E+00	-1.28E+00
	+P 99/90	4.62E+00	6.69E+00	7.16E+00	4.35E+00	3.14E+00	3.15E-01	2.30E+00
	-P 99/90	-3.87E+00	-7.93E+00	-7.01E+00	-4.33E+00	-5.85E+00	-6.46E+00	-8.03E+00
	SIGMA	1.00E+00	1.72E+00	1.67E+00	1.02E+00	1.06E+00	7.99E-01	1.22E+00

LINE REGULATION 7.2V TO 10V		(PPM/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624		-2.45E+00	-1.40E-01	-1.46E+00	-1.59E+00	-2.35E+00	-1.99E+00
	638		-2.60E+00	-1.40E-01	-1.80E-01	2.20E-01	-2.67E+00	-3.20E+00
	639		-4.80E-01	-5.40E-01	-1.64E+00	-1.94E+00	-3.26E+00	-2.06E+00
	640		1.98E+00	3.08E+00	1.30E-01	-1.83E+00	-2.19E+00	-1.02E+00
	641		-3.98E+00	4.10E-01	-1.60E-01	-2.77E+00	-6.22E+00	-5.96E+00
	642		8.00E-02	-2.22E+00	1.00E-02	-2.35E+00	-2.92E+00	-3.97E+00
	MINIMUM		-3.98E+00	-2.22E+00	-1.64E+00	-2.77E+00	-6.22E+00	-5.96E+00
	MEAN		-1.00E+00	1.18E-01	-3.68E-01	-1.73E+00	-3.45E+00	-3.24E+00
	MAXIMUM		1.98E+00	3.08E+00	1.30E-01	2.20E-01	-2.19E+00	-1.02E+00
	+P 99/90		8.89E+00	8.28E+00	2.70E+00	3.16E+00	3.32E+00	4.77E+00
	-P 99/90		-1.09E+01	-8.05E+00	-3.43E+00	-6.63E+00	-1.02E+01	-1.12E+01
	SIGMA		2.33E+00	1.93E+00	7.22E-01	1.15E+00	1.60E+00	1.89E+00

DEVICE TYPE: RH1021CMH-5 VOLT REFERENCE (LTC)
RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 LEAD TO-5 || LOT# 384568.2
LOG# 1590 || TEST DATE 05/24/07 || RTP# 694
P.O.# 46026L

I C S RADIATION TECHNOLOGIES, INC.

=====

LINE REGULATION 10V TO 40V

(PPM/V)

=====

FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
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I C S Radiation Test Results
RH1021CMH-5 (LTC) "BIASED"

LOAD REGULATION SOURCING		(PPM/mA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624	-1.42E+01	-1.44E+01	-1.43E+01	-1.31E+01	-1.44E+01	-1.44E+01	-1.37E+01
	638	-1.35E+01	-1.45E+01	-1.34E+01	-1.51E+01	-1.37E+01	-1.32E+01	-1.35E+01
	639	-1.29E+01	-1.25E+01	-1.33E+01	-1.32E+01	-1.28E+01	-1.34E+01	-1.30E+01
	640	-1.25E+01	-1.29E+01	-1.26E+01	-1.24E+01	-1.35E+01	-1.23E+01	-1.37E+01
	641	-1.53E+01	-1.40E+01	-1.34E+01	-1.21E+01	-1.39E+01	-1.36E+01	-1.47E+01
	642	-1.32E+01	-1.20E+01	-1.34E+01	-1.40E+01	-1.31E+01	-1.35E+01	-1.27E+01
	MINIMUM	-1.53E+01	-1.45E+01	-1.34E+01	-1.51E+01	-1.39E+01	-1.36E+01	-1.47E+01
	MEAN	-1.35E+01	-1.32E+01	-1.32E+01	-1.33E+01	-1.34E+01	-1.32E+01	-1.35E+01
	MAXIMUM	-1.25E+01	-1.20E+01	-1.26E+01	-1.21E+01	-1.28E+01	-1.23E+01	-1.27E+01
	+P 99/90	-8.89E+00	-8.76E+00	-1.17E+01	-8.17E+00	-1.14E+01	-1.10E+01	-1.03E+01
	-P 99/90	-1.81E+01	-1.76E+01	-1.47E+01	-1.85E+01	-1.54E+01	-1.55E+01	-1.68E+01
	SIGMA	1.08E+00	1.04E+00	3.50E-01	1.22E+00	4.73E-01	5.29E-01	7.68E-01

LOAD REGULATION SOURCING		(PPM/mA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624		-2.20E-01	-1.30E-01	1.14E+00	-2.00E-01	-1.40E-01	4.70E-01
	638		-1.03E+00	8.00E-02	-1.60E+00	-2.10E-01	2.80E-01	-4.00E-02
	639		4.20E-01	-3.40E-01	-2.10E-01	1.90E-01	-4.80E-01	-5.00E-02
	640		-4.20E-01	-1.30E-01	6.00E-02	-1.00E+00	1.60E-01	-1.23E+00
	641		1.35E+00	1.89E+00	3.22E+00	1.38E+00	1.66E+00	6.30E-01
	642		1.24E+00	-1.60E-01	-7.30E-01	1.60E-01	-2.60E-01	5.60E-01
	MINIMUM		-1.03E+00	-3.40E-01	-1.60E+00	-1.00E+00	-4.80E-01	-1.23E+00
	MEAN		3.12E-01	2.68E-01	1.48E-01	1.04E-01	2.72E-01	-2.60E-02
	MAXIMUM		1.35E+00	1.89E+00	3.22E+00	1.38E+00	1.66E+00	6.30E-01
	+P 99/90		4.70E+00	4.17E+00	7.91E+00	3.75E+00	3.81E+00	3.14E+00
	-P 99/90		-4.08E+00	-3.63E+00	-7.62E+00	-3.54E+00	-3.27E+00	-3.19E+00
	SIGMA		1.04E+00	9.19E-01	1.83E+00	8.60E-01	8.35E-01	7.46E-01

DEVICE TYPE: RH1021CMH-5 VOLT REFERENCE (LTC)
RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 LEAD TO-5 || LOT# 384568.2
LOG# 1590 || TEST DATE 05/24/07 || RTP# 694
P.O.# 46026L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 (LTC) "BIASED"

LOAD REGULATION SINKING		(PPM/mA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624	5.56E+01	5.80E+01	5.75E+01	5.73E+01	5.76E+01	5.59E+01	5.62E+01
	638	5.73E+01	5.90E+01	5.81E+01	5.98E+01	5.97E+01	5.86E+01	5.84E+01
	639	6.02E+01	6.16E+01	6.09E+01	6.26E+01	6.33E+01	6.18E+01	6.12E+01
	640	5.45E+01	5.66E+01	5.64E+01	5.80E+01	5.67E+01	5.62E+01	5.48E+01
	641	5.86E+01	5.89E+01	5.82E+01	5.86E+01	5.96E+01	5.93E+01	5.82E+01
	642	5.98E+01	6.04E+01	6.06E+01	6.14E+01	6.24E+01	6.20E+01	6.06E+01
	MINIMUM	5.45E+01	5.66E+01	5.64E+01	5.80E+01	5.67E+01	5.62E+01	5.48E+01
	MEAN	5.81E+01	5.93E+01	5.89E+01	6.01E+01	6.03E+01	5.96E+01	5.86E+01
	MAXIMUM	6.02E+01	6.16E+01	6.09E+01	6.26E+01	6.33E+01	6.20E+01	6.12E+01
	+P 99/90	6.78E+01	6.73E+01	6.69E+01	6.82E+01	7.14E+01	6.97E+01	6.93E+01
	-P 99/90	4.84E+01	5.13E+01	5.08E+01	5.20E+01	4.93E+01	4.94E+01	4.80E+01
	SIGMA	2.29E+00	1.89E+00	1.90E+00	1.91E+00	2.60E+00	2.39E+00	2.51E+00

LOAD REGULATION SINKING		(PPM/mA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624		2.40E+00	1.85E+00	1.70E+00	2.01E+00	2.80E-01	5.80E-01
	638		1.72E+00	8.20E-01	2.57E+00	2.47E+00	1.38E+00	1.11E+00
	639		1.43E+00	7.70E-01	2.41E+00	3.14E+00	1.66E+00	1.03E+00
	640		2.06E+00	1.92E+00	3.51E+00	2.18E+00	1.73E+00	3.20E-01
	641		2.90E-01	-3.80E-01	3.00E-02	1.07E+00	6.90E-01	-4.10E-01
	642		6.10E-01	8.50E-01	1.62E+00	2.57E+00	2.18E+00	7.90E-01
	MINIMUM		2.90E-01	-3.80E-01	3.00E-02	1.07E+00	6.90E-01	-4.10E-01
	MEAN		1.22E+00	7.96E-01	2.03E+00	2.29E+00	1.53E+00	5.68E-01
	MAXIMUM		2.06E+00	1.92E+00	3.51E+00	3.14E+00	2.18E+00	1.11E+00
	+P 99/90		4.39E+00	4.25E+00	7.56E+00	5.53E+00	3.86E+00	3.23E+00
	-P 99/90		-1.95E+00	-2.66E+00	-3.50E+00	-9.54E-01	-8.03E-01	-2.09E+00
	SIGMA		7.48E-01	8.14E-01	1.30E+00	7.64E-01	5.49E-01	6.27E-01

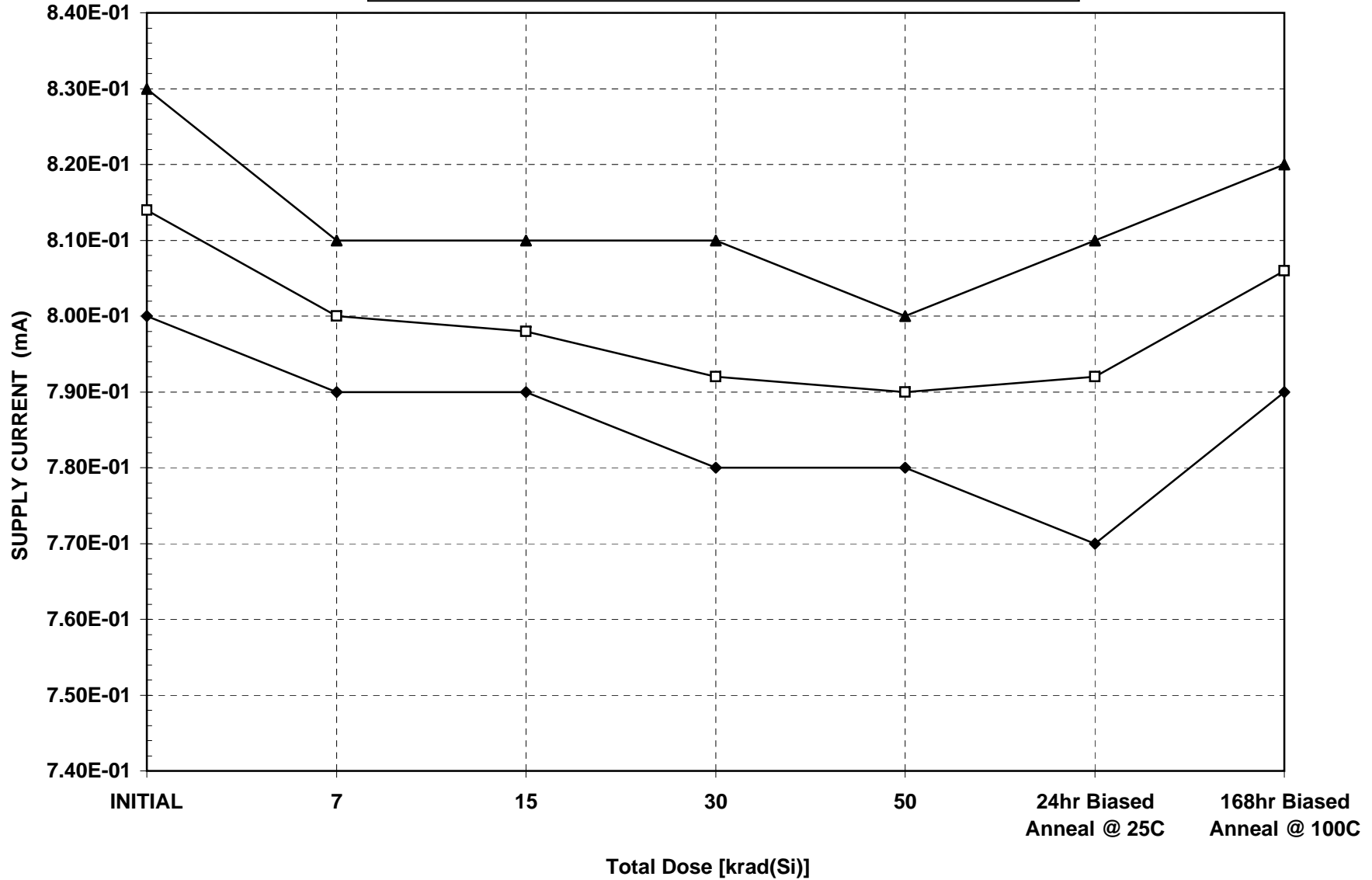
DEVICE TYPE: RH1021CMH-5 VOLT REFERENCE (LTC)
RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 LEAD TO-5 || LOT# 384568.2
 LOG# 1590 || TEST DATE 05/24/07 || RTP# 694
 P.O.# 46026L

I C S RADIATION TECHNOLOGIES, INC.

RH1021CMH-5 (LTC) BIASED
I C S Radiation Test Results Log # 1590 5/24/07

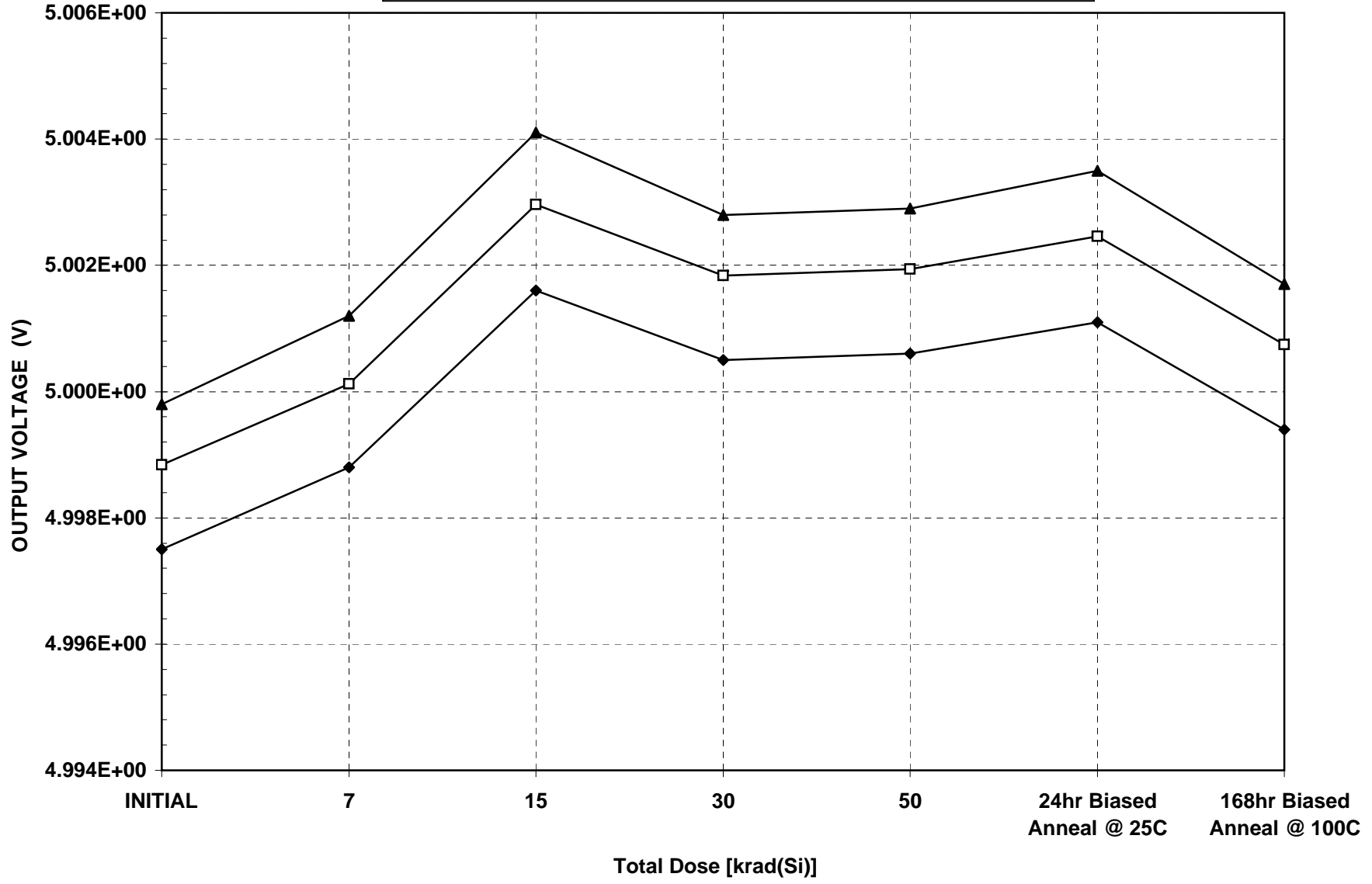
SUPPLY CURRENT (mA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 (LTC) BIASED
IC S Radiation Test Results Log # 1590 5/24/07

OUTPUT VOLTAGE (V)

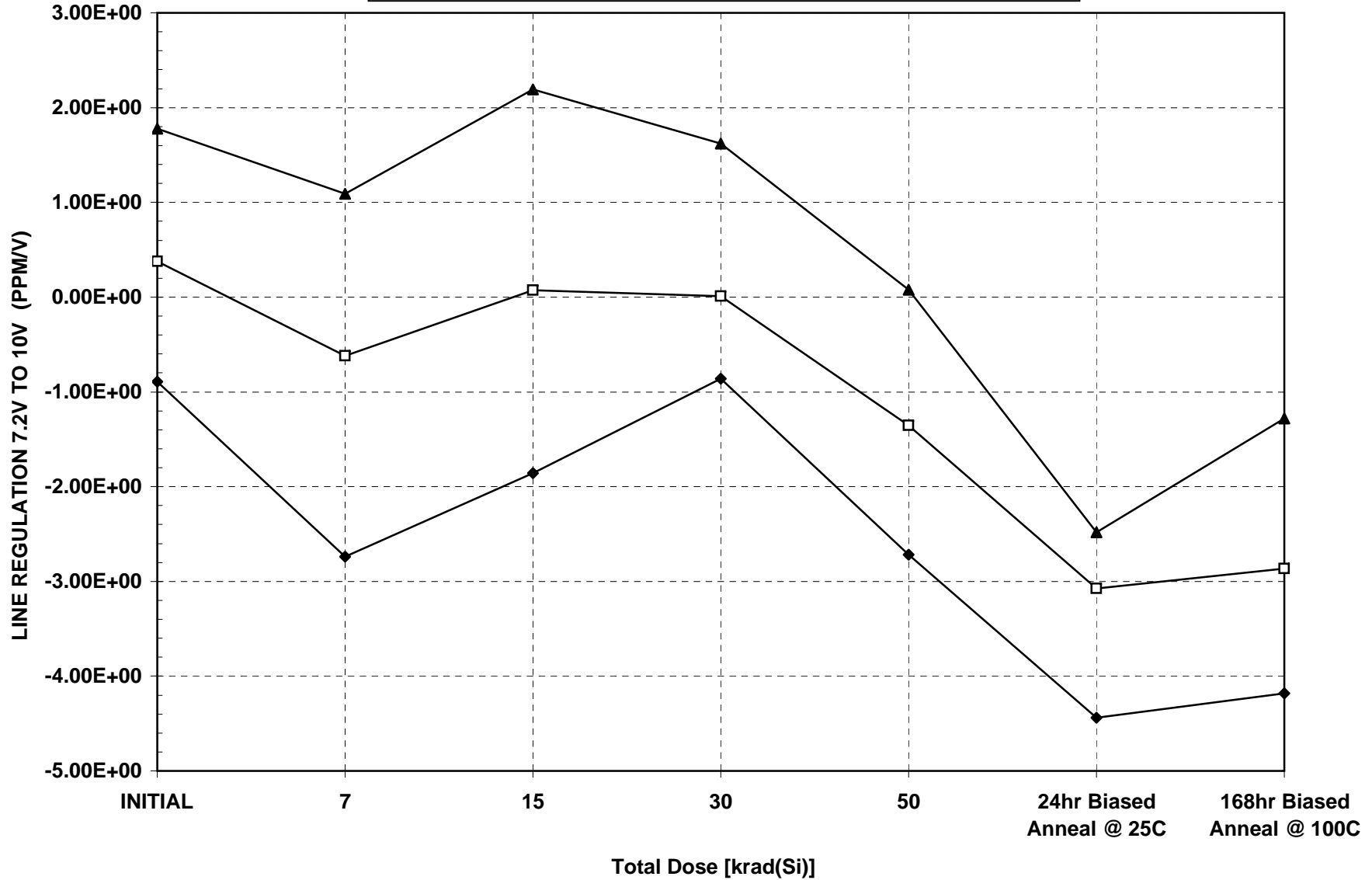


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 (LTC) BIASED

IC S Radiation Test Results Log # 1590 5/24/07

LINE REGULATION 7.2V TO 10V (PPM/V)

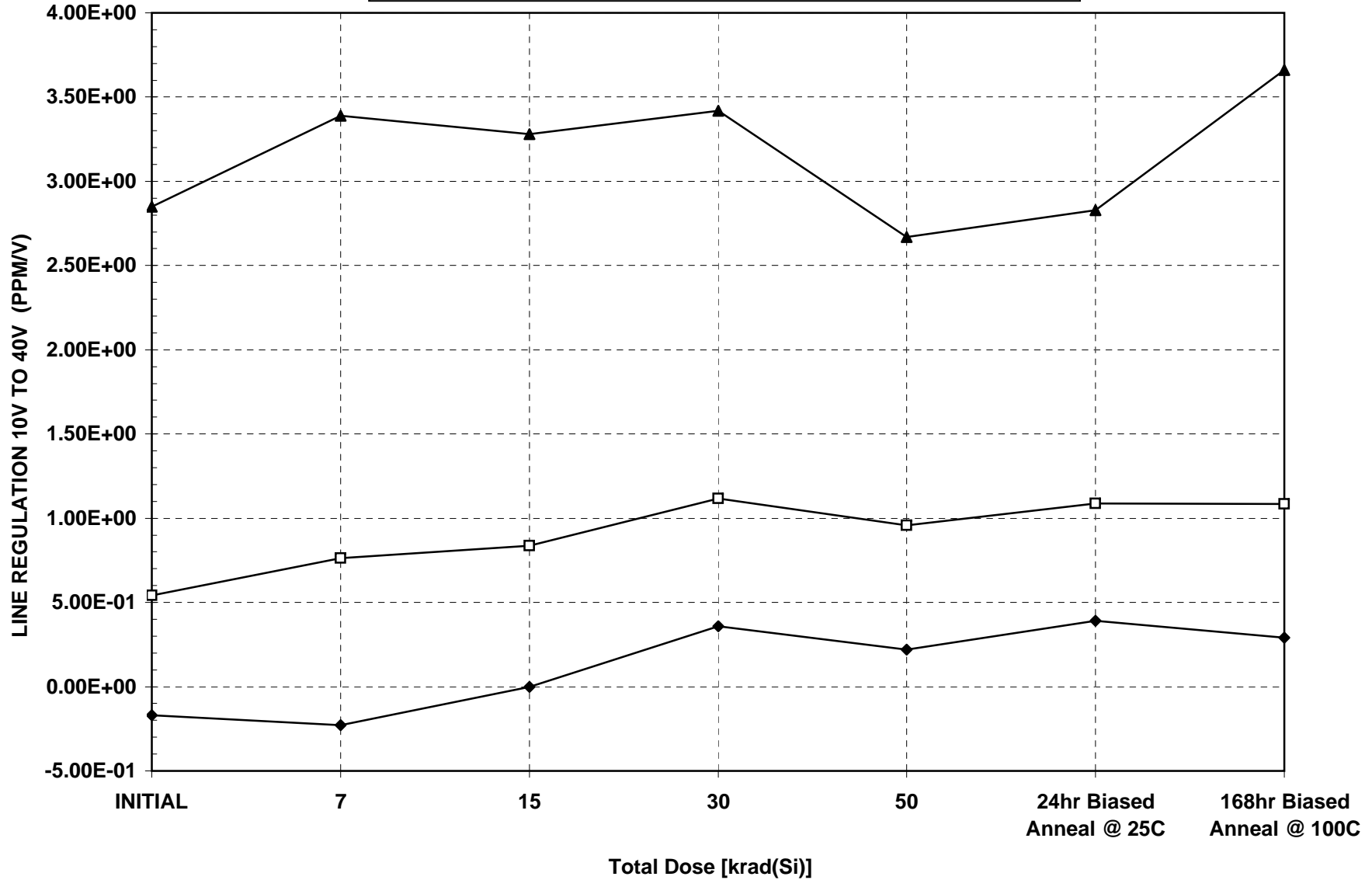


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 (LTC) BIASED

IC S Radiation Test Results Log # 1590 5/24/07

LINE REGULATION 10V TO 40V (PPM/V)

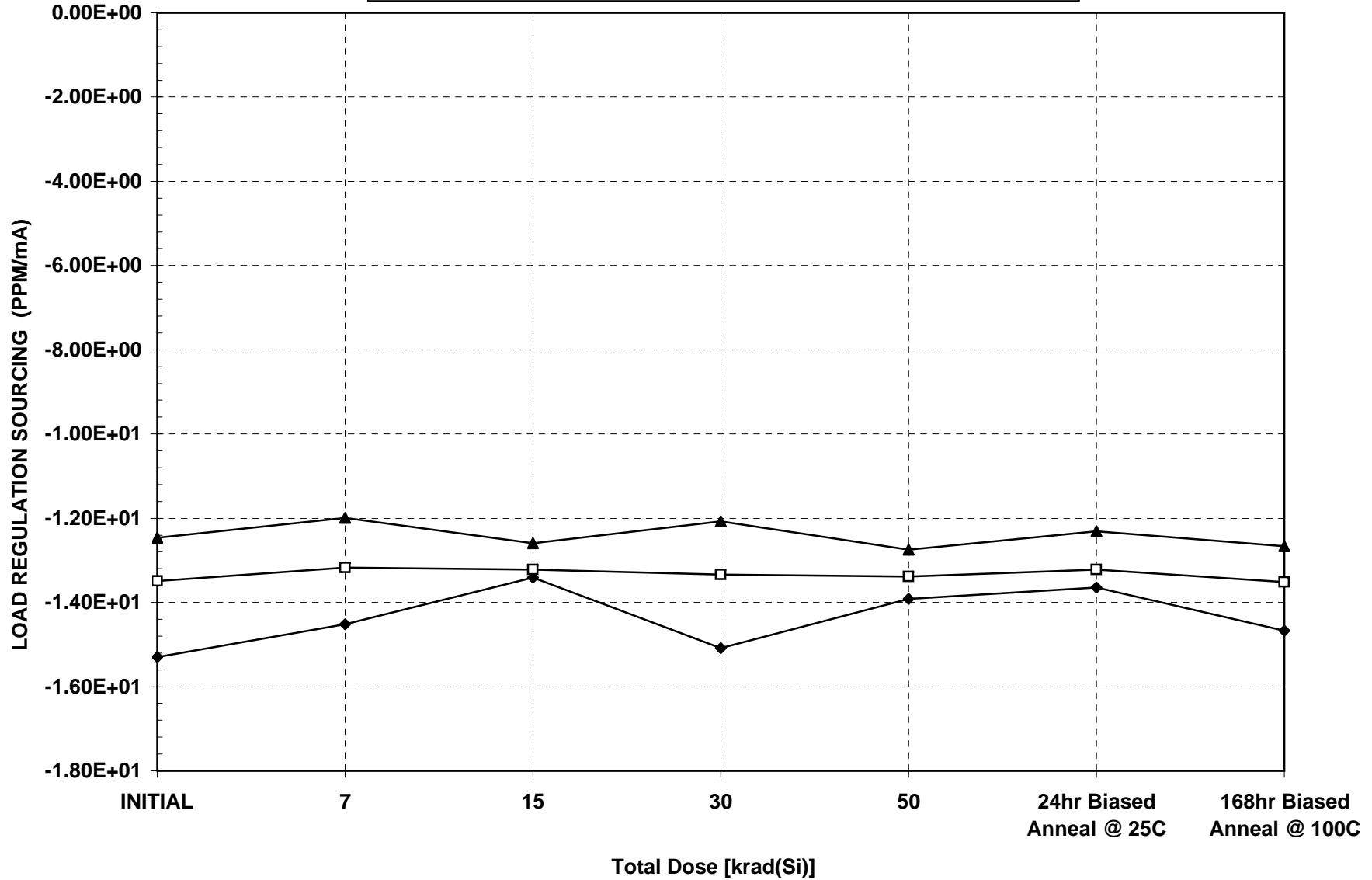


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 (LTC) BIASED

IC S Radiation Test Results Log # 1590 5/24/07

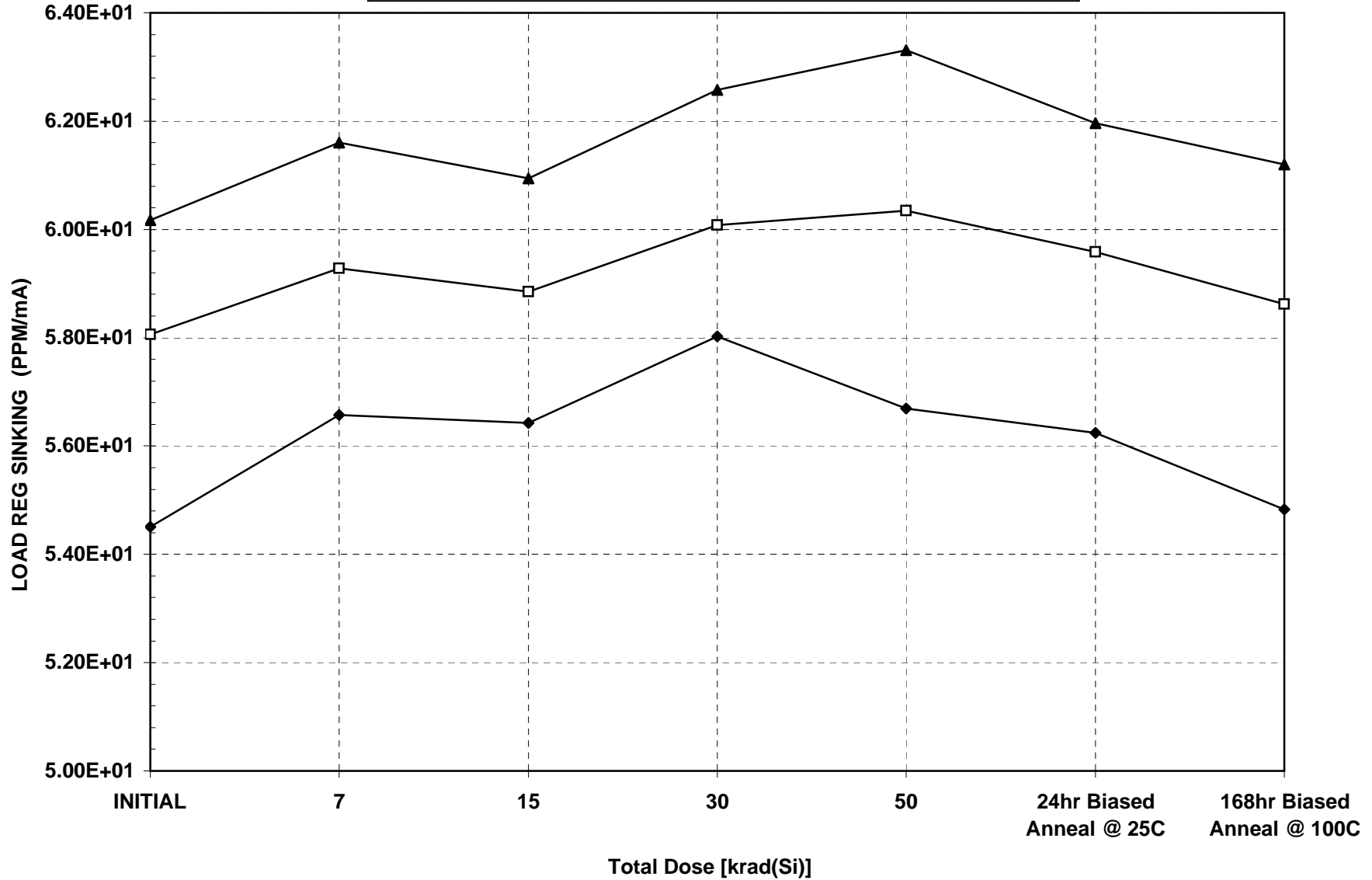
LOAD REGULATION SOURCING (PPM/mA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 (LTC) BIASED
I C S Radiation Test Results Log # 1590 5/24/07

LOAD REG SINKING (PPM/mA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

Radiation Test Results

RH1021CMH-5
5 Volt Reference
Linear Technology Corporation
D/C 0617B, Lot# 384568.2
Test Date 05-24-07
Log# 1590 and 1591, ELDRS Test
P.O.# 46026L

This test consisted of two test logs, Logs 1590 and 1591. The test was to compare the radiation effects differences between two bias conditions: Log 1590, +30 volts and Log 1591 which had all leads grounded. The six test requirements are stated in test procedure RTP 694, dated March 23, 2007.

There was very little difference noted between the two bias conditions for all parameters tested. The test results of the two tests (both bias conditions) were less than the LTC data sheet limits of 20krad(Si) at the 50krad(Si) test level.

These lots **PASSED** the six test requirements as stated in the Radiation Test Procedure RTP 694, dated March 23, 2007.

TID BIASED DEVICES, Log 1590

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.78mA. The maximum current was 0.80mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.001V. The maximum voltage was 5.003V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -2.72ppm/V. The parameter maximum was 0.08ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.22ppm/V. The parameter maximum was 2.67ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -13.9ppm/mA. The parameter maximum was -12.8ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 56.7ppm/mA. The parameter maximum was 63.3ppm/mA.

TID GROUNDED DEVICES, Log 1591

Supply Current: The Post-Radiation limit at 50krad(Si) was 1.2mA maximum. The parameter minimum current 0.75mA. The maximum current was 0.81mA.

Output Voltage: The Post-Radiation limit at 50krad(Si) was 4.991V minimum and 5.009V maximum. The parameter minimum voltage was 5.000V. The maximum voltage was 5.002V.

Line Regulation 7.2V = Vin = 10V: The Post-Radiation limit at 50krad(Si) was 1.3.5ppm/V maximum. The parameter minimum was -3.55ppm/V. The parameter maximum was -0.96ppm/V.

Line Regulation 10V = Vin = 40V: The Post-Radiation limit at 50krad(Si) was 6ppm/V maximum. The parameter minimum was 0.74ppm/V. The parameter maximum was 1.36ppm/V.

Load Regulation Source 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 20ppm/mA maximum. The parameter minimum was -14.1ppm/mA. The parameter maximum was -12.4ppm/mA.

Load Regulation Sinking 0mA = Iout = 10mA: The Post-Radiation limit at 50krad(Si) was 100ppm/mA maximum. The parameter minimum was 58.6ppm/mA. The parameter maximum was 65.1ppm/mA.

ANOMOLIES:

1. There were no device anomalies during this test.

If you should require any further clarification on this matter, please contact me directly: TEL-562-923-1837, FAX-562-923-3609, or E-Mail mike@icsrad.com.

ICS Radiation Technologies, Inc.

Dr. Michael K. Gauthier, P.E.
President
August 10, 2007

March 23, 2007

RADIATION TEST PROCEDURE

No. 694

Device Type: RH1021CMH-5 5 Volt REFERENCE
Manufacturer: Linear Technology Corp.

TEST	TEST NAME	TEST CONDITIONS	Limits Exposure Levels rad(Si)				Units
			20k	50k	100k	200k	
1	Supply Current		1.2	1.2	1.2	1.2	mA Max
2	Output Voltage		4.993 5.007	4.991 5.009	4.9875 5.0125	4.984 5.016	V Min V Max
3	Line Regulation	$7.2V \leq V_{in} \leq 10V$	12	13.5	15	18	ppm/V Max
4	Line Regulation	$10V \leq V_{in} \leq 40V$	6	6	7	9	ppm/V Max
5	Load Regulation Source	$0 \leq I_{out} \leq 10mA$	20	20	20	20	ppm/mA Max
6	Load Regulation Sink	$0 \leq I_{out} \leq 10mA$	100	100	100	100	ppm/mA Max

Measurements shall be made at room (ambient) temperature.

Test conducted using an Analog Devices LTS-2020 Component Test System, with the LTS-2101 Family Board, LTS0600/0604 Socket Assembly, LTS0325/RH1021-5 DUT board, RH1021 BGSS030309.

Software: RH1021-5. "RH1021-5.SRC"

Data Processing use King Program: P99/90 Ktl =4.666 for 5 devices

Return samples to customer.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

SUPPLY CURRENT		(MA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624	8.00E-01	7.90E-01	8.00E-01	8.00E-01	8.10E-01	7.90E-01	8.10E-01
	643	8.30E-01	7.90E-01	8.30E-01	8.20E-01	8.10E-01	8.10E-01	8.20E-01
	644	8.20E-01	8.10E-01	8.10E-01	8.00E-01	8.10E-01	7.90E-01	7.90E-01
	645	7.60E-01	8.00E-01	7.60E-01	7.40E-01	7.50E-01	7.40E-01	7.50E-01
	646	7.90E-01	8.10E-01	7.80E-01	7.70E-01	7.60E-01	7.80E-01	7.80E-01
	647	7.90E-01	7.90E-01	7.80E-01	7.70E-01	7.80E-01	7.70E-01	7.80E-01
	MINIMUM	7.60E-01	7.90E-01	7.60E-01	7.40E-01	7.50E-01	7.40E-01	7.50E-01
	MEAN	7.98E-01	8.00E-01	7.92E-01	7.80E-01	7.82E-01	7.78E-01	7.84E-01
	MAXIMUM	8.30E-01	8.10E-01	8.30E-01	8.20E-01	8.10E-01	8.10E-01	8.20E-01
	+P 99/90	9.27E-01	8.47E-01	9.21E-01	9.24E-01	9.11E-01	8.99E-01	9.01E-01
	-P 99/90	6.69E-01	7.53E-01	6.63E-01	6.36E-01	6.53E-01	6.57E-01	6.67E-01
	SIGMA	2.77E-02	1.00E-02	2.77E-02	3.08E-02	2.77E-02	2.59E-02	2.51E-02

SUPPLY CURRENT		(MA)					[DELTA]	
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624		-1.00E-02	0.00E+00	0.00E+00	1.00E-02	-1.00E-02	1.00E-02
	643		-4.00E-02	0.00E+00	-1.00E-02	-2.00E-02	-2.00E-02	-1.00E-02
	644		-1.00E-02	-1.00E-02	-2.00E-02	-1.00E-02	-3.00E-02	-3.00E-02
	645		4.00E-02	0.00E+00	-2.00E-02	-1.00E-02	-2.00E-02	-1.00E-02
	646		2.00E-02	-1.00E-02	-2.00E-02	-3.00E-02	-1.00E-02	-1.00E-02
	647		0.00E+00	-1.00E-02	-2.00E-02	-1.00E-02	-2.00E-02	-1.00E-02
	MINIMUM		-4.00E-02	-1.00E-02	-2.00E-02	-3.00E-02	-3.00E-02	-3.00E-02
	MEAN		2.00E-03	-6.00E-03	-1.80E-02	-1.60E-02	-2.00E-02	-1.40E-02
	MAXIMUM		4.00E-02	0.00E+00	-1.00E-02	-1.00E-02	-1.00E-02	-1.00E-02
	+P 99/90		1.44E-01	1.96E-02	2.87E-03	2.57E-02	1.30E-02	2.77E-02
	-P 99/90		-1.40E-01	-3.16E-02	-3.89E-02	-5.77E-02	-5.30E-02	-5.57E-02
	SIGMA		3.03E-02	5.48E-03	4.47E-03	8.94E-03	7.07E-03	8.94E-03

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
 LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

OUTPUT VOLTAGE		(V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624	4.997E+00	4.997E+00	4.999E+00	4.997E+00	4.997E+00	4.997E+00	4.996E+00
	643	4.999E+00	5.001E+00	5.003E+00	5.002E+00	5.002E+00	5.003E+00	5.001E+00
	644	4.998E+00	5.001E+00	5.002E+00	5.000E+00	5.000E+00	5.001E+00	4.999E+00
	645	4.998E+00	4.999E+00	5.001E+00	4.999E+00	5.000E+00	5.000E+00	4.999E+00
	646	4.997E+00	4.999E+00	5.001E+00	4.999E+00	5.000E+00	5.000E+00	4.998E+00
	647	4.999E+00	5.001E+00	5.003E+00	5.001E+00	5.001E+00	5.002E+00	5.000E+00
	MINIMUM	4.997E+00	4.999E+00	5.001E+00	4.999E+00	5.000E+00	5.000E+00	4.998E+00
	MEAN	4.998E+00	5.000E+00	5.002E+00	5.000E+00	5.001E+00	5.001E+00	4.999E+00
	MAXIMUM	4.999E+00	5.001E+00	5.003E+00	5.002E+00	5.002E+00	5.003E+00	5.001E+00
	+P 99/90	5.003E+00	5.005E+00	5.007E+00	5.005E+00	5.005E+00	5.006E+00	5.004E+00
	-P 99/90	4.993E+00	4.995E+00	4.997E+00	4.995E+00	4.996E+00	4.996E+00	4.994E+00
	SIGMA	1.008E-03	1.130E-03	1.057E-03	1.115E-03	1.056E-03	1.069E-03	1.085E-03

OUTPUT VOLTAGE		(V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624		3.000E-04	2.300E-03	2.000E-04	-5.000E-04	1.000E-04	-6.000E-04
	643		1.900E-03	3.900E-03	2.400E-03	2.700E-03	3.500E-03	1.600E-03
	644		3.100E-03	3.900E-03	2.200E-03	2.700E-03	3.400E-03	1.500E-03
	645		1.300E-03	3.500E-03	1.900E-03	2.100E-03	2.800E-03	8.000E-04
	646		2.000E-03	3.900E-03	2.000E-03	2.500E-03	3.300E-03	3.000E-03
	647		1.900E-03	3.800E-03	1.900E-03	2.100E-03	2.800E-03	1.000E-03
	MINIMUM		1.300E-03	3.500E-03	1.900E-03	2.100E-03	2.800E-03	8.000E-04
	MEAN		2.040E-03	3.800E-03	2.080E-03	2.420E-03	3.160E-03	1.580E-03
	MAXIMUM		3.100E-03	3.900E-03	2.400E-03	2.700E-03	3.500E-03	3.000E-03
	+P 99/90		5.093E-03	4.608E-03	3.092E-03	3.835E-03	4.728E-03	5.599E-03
	-P 99/90		-1.013E-03	2.992E-03	1.068E-03	1.005E-03	1.592E-03	-2.439E-03
	SIGMA		6.542E-04	1.732E-04	2.168E-04	3.033E-04	3.362E-04	8.614E-04

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
 LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

LINE REGULATION 7.2V TO 10V		(PPM/V)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624	-1.28E+00	-4.30E-01	1.88E+00	-1.09E+00	1.74E+00	1.71E+00	1.94E+00
	643	-4.20E-01	-2.74E+00	-1.46E+00	2.74E+00	-9.60E-01	-2.80E+00	-5.90E-01
	644	1.60E-01	3.00E-01	3.80E-01	-5.20E-01	-3.55E+00	-1.53E+00	-4.09E+00
	645	1.70E+00	1.09E+00	6.00E-01	1.26E+00	-2.61E+00	-3.40E+00	-1.64E+00
	646	-1.62E+00	-2.20E+00	-1.40E+00	-3.71E+00	-2.61E+00	-6.56E+00	-1.27E+00
	647	-3.00E-01	4.40E-01	-1.56E+00	-1.08E+00	-1.57E+00	-3.07E+00	-1.37E+00
	MINIMUM	-1.62E+00	-2.74E+00	-1.56E+00	-3.71E+00	-3.55E+00	-6.56E+00	-4.09E+00
	MEAN	-9.60E-02	-6.22E-01	-6.88E-01	-2.62E-01	-2.26E+00	-3.47E+00	-1.79E+00
	MAXIMUM	1.70E+00	1.09E+00	6.00E-01	2.74E+00	-9.60E-01	-1.53E+00	-5.90E-01
	+P 99/90	5.50E+00	7.42E+00	4.35E+00	1.12E+01	2.45E+00	5.23E+00	4.47E+00
	-P 99/90	-5.70E+00	-8.66E+00	-5.73E+00	-1.17E+01	-6.97E+00	-1.22E+01	-8.05E+00
	SIGMA	1.20E+00	1.72E+00	1.08E+00	2.45E+00	1.01E+00	1.87E+00	1.34E+00

LINE REGULATION 7.2V TO 10V		(PPM/V)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624		8.50E-01	3.16E+00	1.90E-01	3.02E+00	2.99E+00	3.22E+00
	643		-2.32E+00	-1.04E+00	3.16E+00	-5.40E-01	-1.11E+00	-1.70E-01
	644		1.40E-01	2.20E-01	-6.80E-01	-3.71E+00	-3.56E+00	-4.25E+00
	645		-6.10E-01	-1.10E+00	-4.40E-01	-4.31E+00	-8.26E+00	-3.34E+00
	646		-5.80E-01	2.20E-01	-2.09E+00	-9.90E-01	-1.45E+00	3.50E-01
	647		7.40E-01	-1.26E+00	-7.80E-01	-1.27E+00	-2.77E+00	-1.07E+00
	MINIMUM		-2.32E+00	-1.26E+00	-2.09E+00	-4.31E+00	-8.26E+00	-4.25E+00
	MEAN		-5.26E-01	-5.92E-01	-1.66E-01	-2.16E+00	-3.43E+00	-1.70E+00
	MAXIMUM		7.40E-01	2.20E-01	3.16E+00	-5.40E-01	-1.11E+00	3.50E-01
	+P 99/90		4.83E+00	2.89E+00	9.01E+00	5.85E+00	9.99E+00	7.67E+00
	-P 99/90		-5.88E+00	-4.07E+00	-9.35E+00	-1.02E+01	-1.68E+01	-1.11E+01
	SIGMA		1.15E+00	7.46E-01	1.97E+00	1.72E+00	2.88E+00	2.01E+00

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
 LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

LINE REGULATION 10V TO 40V		(PPM/V)							
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR	
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED	
							ANNEAL	ANNEAL	
							25C	100C	
S/N -----									
CONTROL	624	2.70E-01	0.00E+00	-2.00E-02	4.20E-01	-1.00E-01	-4.00E-02	-2.00E-02	
	643	2.00E-02	3.39E-01	1.90E-01	5.30E-01	8.00E-01	7.20E-01	2.60E-01	
	644	1.70E-01	4.40E-01	1.40E-01	4.70E-01	1.13E+00	8.20E-01	7.80E-01	
	645	6.00E-02	-2.30E-01	1.20E-01	6.50E-01	7.40E-01	6.80E-01	4.30E-01	
	646	6.00E-02	0.00E+00	3.00E-02	4.80E-01	9.40E-01	1.00E+00	5.60E-01	
	647	3.10E-01	2.20E-01	4.70E-01	9.10E-01	1.36E+00	1.16E+00	7.90E-01	
	MINIMUM	2.00E-02	-2.30E-01	3.00E-02	4.70E-01	7.40E-01	6.80E-01	2.60E-01	
	MEAN	1.24E-01	1.54E-01	1.90E-01	6.08E-01	9.94E-01	8.76E-01	5.64E-01	
	MAXIMUM	3.10E-01	4.40E-01	4.70E-01	9.10E-01	1.36E+00	1.16E+00	7.90E-01	
	+P 99/90	6.75E-01	1.41E+00	9.69E-01	1.46E+00	2.18E+00	1.81E+00	1.63E+00	
	-P 99/90	-4.27E-01	-1.11E+00	-5.89E-01	-2.48E-01	-1.90E-01	-6.28E-02	-5.00E-01	
	SIGMA	1.18E-01	2.70E-01	1.67E-01	1.83E-01	2.54E-01	2.01E-01	2.28E-01	

LINE REGULATION 10V TO 40V		(PPM/V)				[DELTA]			
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR	
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED	
							ANNEAL	ANNEAL	
							25C	100C	
S/N -----									
CONTROL	624		-2.70E-01	-2.90E-01	1.50E-01	-3.70E-01	-3.10E-01	-2.90E-01	
	643		3.19E-01	1.70E-01	5.10E-01	7.80E-01	7.00E-01	2.40E-01	
	644		2.70E-01	-3.00E-02	3.00E-01	9.60E-01	6.50E-01	6.10E-01	
	645		-2.90E-01	6.00E-02	5.90E-01	6.80E-01	6.20E-01	3.70E-01	
	646		-6.00E-02	-3.00E-02	4.20E-01	8.80E-01	9.40E-01	5.00E-01	
	647		-9.00E-02	1.60E-01	6.00E-01	1.05E+00	8.50E-01	4.80E-01	
	MINIMUM		-2.90E-01	-3.00E-02	3.00E-01	6.80E-01	6.20E-01	2.40E-01	
	MEAN		2.98E-02	6.60E-02	4.84E-01	8.70E-01	7.52E-01	4.40E-01	
	MAXIMUM		3.19E-01	1.70E-01	6.00E-01	1.05E+00	9.40E-01	6.10E-01	
	+P 99/90		1.23E+00	5.22E-01	1.07E+00	1.55E+00	1.39E+00	1.10E+00	
	-P 99/90		-1.17E+00	-3.90E-01	-1.03E-01	1.91E-01	1.11E-01	-2.16E-01	
	SIGMA		2.58E-01	9.76E-02	1.26E-01	1.46E-01	1.37E-01	1.41E-01	

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
 LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

LOAD REGULATION SOURCING		(PPMMA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624	-1.38E+01	-1.44E+01	-1.43E+01	-1.46E+01	-1.48E+01	-1.42E+01	-1.30E+01
	643	-1.38E+01	-1.45E+01	-1.36E+01	-1.32E+01	-1.36E+01	-1.32E+01	-1.30E+01
	644	-1.31E+01	-1.25E+01	-1.36E+01	-1.25E+01	-1.38E+01	-1.24E+01	-1.37E+01
	645	-1.33E+01	-1.29E+01	-1.33E+01	-1.33E+01	-1.35E+01	-1.39E+01	-1.39E+01
	646	-1.38E+01	-1.40E+01	-1.40E+01	-1.36E+01	-1.41E+01	-1.44E+01	-1.41E+01
	647	-1.34E+01	-1.20E+01	-1.25E+01	-1.46E+01	-1.24E+01	-1.40E+01	-1.33E+01
	MINIMUM	-1.38E+01	-1.45E+01	-1.40E+01	-1.46E+01	-1.41E+01	-1.44E+01	-1.41E+01
	MEAN	-1.35E+01	-1.32E+01	-1.34E+01	-1.34E+01	-1.35E+01	-1.36E+01	-1.36E+01
	MAXIMUM	-1.31E+01	-1.20E+01	-1.25E+01	-1.25E+01	-1.24E+01	-1.24E+01	-1.30E+01
	+P 99/90	-1.21E+01	-8.32E+00	-1.08E+01	-9.84E+00	-1.04E+01	-9.96E+00	-1.14E+01
	-P 99/90	-1.49E+01	-1.80E+01	-1.60E+01	-1.71E+01	-1.66E+01	-1.72E+01	-1.58E+01
	SIGMA	2.94E-01	1.04E+00	5.48E-01	7.73E-01	6.61E-01	7.73E-01	4.66E-01

LOAD REGULATION SOURCING		(PPMMA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED ANNEAL 25C	BIASED ANNEAL 100C
S/N -----								
CONTROL	624		-6.00E-01	-5.10E-01	-7.60E-01	-1.01E+00	-3.50E-01	8.60E-01
	643		-7.10E-01	2.00E-01	5.80E-01	2.40E-01	6.50E-01	8.20E-01
	644		6.20E-01	-4.10E-01	6.40E-01	-7.00E-01	-7.80E-01	-5.70E-01
	645		4.40E-01	1.00E-02	7.00E-02	-1.80E-01	-1.02E+00	-5.60E-01
	646		-1.70E-01	-2.00E-01	1.50E-01	-3.30E-01	-2.00E-01	-3.60E-01
	647		1.40E+00	8.80E-01	-1.23E+00	1.01E+00	-5.90E-01	1.20E-01
	MINIMUM		-7.10E-01	-4.10E-01	-1.23E+00	-7.00E-01	-1.02E+00	-5.70E-01
	MEAN		3.16E-01	9.60E-02	4.20E-02	8.00E-03	-3.88E-01	-1.10E-01
	MAXIMUM		1.40E+00	8.80E-01	6.40E-01	1.01E+00	6.50E-01	8.20E-01
	+P 99/90		4.06E+00	2.40E+00	3.56E+00	3.06E+00	2.66E+00	2.64E+00
	-P 99/90		-3.43E+00	-2.21E+00	-3.48E+00	-3.04E+00	-3.44E+00	-2.86E+00
	SIGMA		8.02E-01	4.94E-01	7.55E-01	6.54E-01	6.53E-01	5.90E-01

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
 RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
 LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
 P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

I C S Radiation Test Results
RH1021CMH-5 5V REF (LTC) UNBIASED

LOAD REGULATION SINKING		(PPMMA)						
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624	5.67E+01	5.80E+01	5.75E+01	5.72E+01	5.71E+01	5.73E+01	5.63E+01
	643	6.15E+01	5.90E+01	6.43E+01	6.42E+01	6.51E+01	6.48E+01	6.33E+01
	644	5.82E+01	6.16E+01	5.70E+01	6.10E+01	6.03E+01	6.15E+01	5.96E+01
	645	5.70E+01	5.66E+01	5.97E+01	6.00E+01	6.14E+01	6.15E+01	5.95E+01
	646	5.54E+01	5.89E+01	5.82E+01	5.78E+01	5.86E+01	5.88E+01	5.62E+01
	647	6.08E+01	6.04E+01	6.17E+01	6.39E+01	6.47E+01	6.19E+01	6.39E+01
	MINIMUM	5.54E+01	5.66E+01	5.70E+01	5.78E+01	5.86E+01	5.88E+01	5.62E+01
	MEAN	5.86E+01	5.93E+01	6.02E+01	6.14E+01	6.20E+01	6.17E+01	6.05E+01
	MAXIMUM	6.15E+01	6.16E+01	6.43E+01	6.42E+01	6.51E+01	6.48E+01	6.39E+01
	+P 99/90	7.05E+01	6.81E+01	7.37E+01	7.40E+01	7.51E+01	7.16E+01	7.53E+01
	-P 99/90	4.67E+01	5.05E+01	4.67E+01	4.87E+01	4.90E+01	5.17E+01	4.57E+01
	SIGMA	2.55E+00	1.89E+00	2.90E+00	2.71E+00	2.80E+00	2.13E+00	3.17E+00

LOAD REGULATION SINKING		(PPMMA)				[DELTA]		
FLUENCE	krad(Si)	INITIAL	7.00E+00	1.50E+01	3.00E+01	5.00E+01	24 HOUR	168 HOUR
FLUX	rad(Si)/sec		8.20E-03	8.20E-03	8.20E-03	8.20E-03	BIASED	BIASED
							ANNEAL	ANNEAL
							25C	100C
S/N -----								
CONTROL	624		1.35E+00	8.00E-01	5.20E-01	3.80E-01	6.50E-01	-3.60E-01
	643		-2.47E+00	2.88E+00	2.76E+00	3.66E+00	9.00E-02	1.83E+00
	644		3.44E+00	-1.13E+00	2.81E+00	2.17E+00	3.34E+00	1.47E+00
	645		-3.90E-01	2.78E+00	3.04E+00	4.45E+00	4.54E+00	2.51E+00
	646		3.42E+00	2.73E+00	2.33E+00	3.21E+00	3.32E+00	7.40E-01
	647		-4.50E-01	8.30E-01	3.04E+00	3.85E+00	1.01E+00	3.10E+00
	MINIMUM		-2.47E+00	-1.13E+00	2.33E+00	2.17E+00	9.00E-02	7.40E-01
	MEAN		7.10E-01	1.62E+00	2.80E+00	3.47E+00	2.46E+00	1.93E+00
	MAXIMUM		3.44E+00	2.88E+00	3.04E+00	4.45E+00	4.54E+00	3.10E+00
	+P 99/90		1.29E+01	9.82E+00	4.15E+00	7.44E+00	1.11E+01	6.20E+00
	-P 99/90		-1.15E+01	-6.58E+00	1.44E+00	-5.04E-01	-6.13E+00	-2.34E+00
	SIGMA		2.62E+00	1.76E+00	2.91E-01	8.51E-01	1.84E+00	9.14E-01

DEVICE TYPE: RH1021CMH-5 5V REF (LTC)
RADIATION SOURCE: SHEPHERD LOW DOSE (Co60), 1.25MeV

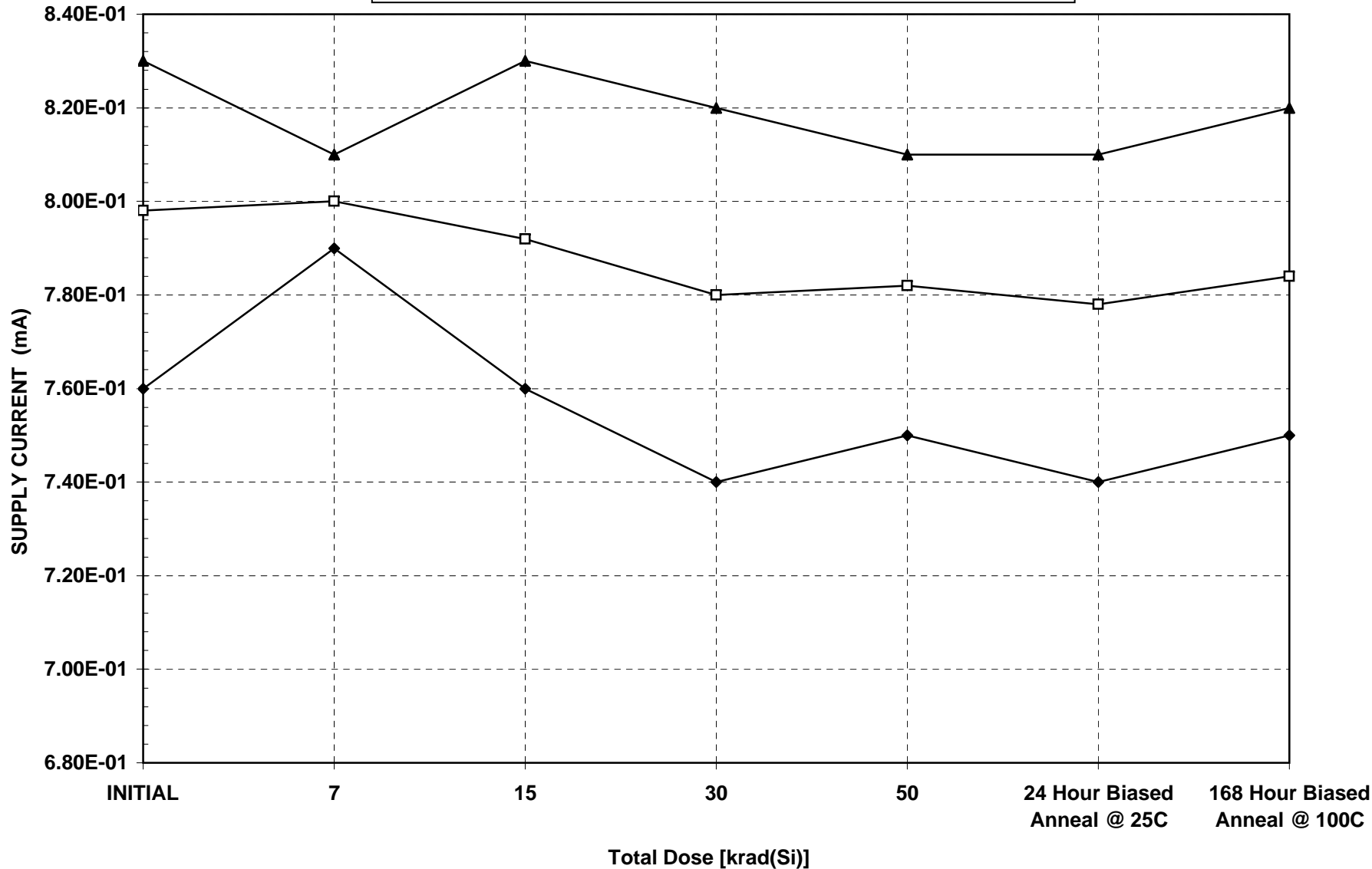
D/C 0617B || PACKAGE 8 PIN TO-5 || LOT# 384568.2
LOG# 1591 || TEST DATE 05-24-07 || RTP# 694
P.O.# 46027L

I C S RADIATION TECHNOLOGIES, INC.

RH1021CMH-5 5V REF (LTC) UNBIASED

IC S Radiation Test Results Log # 1591 5/24/07

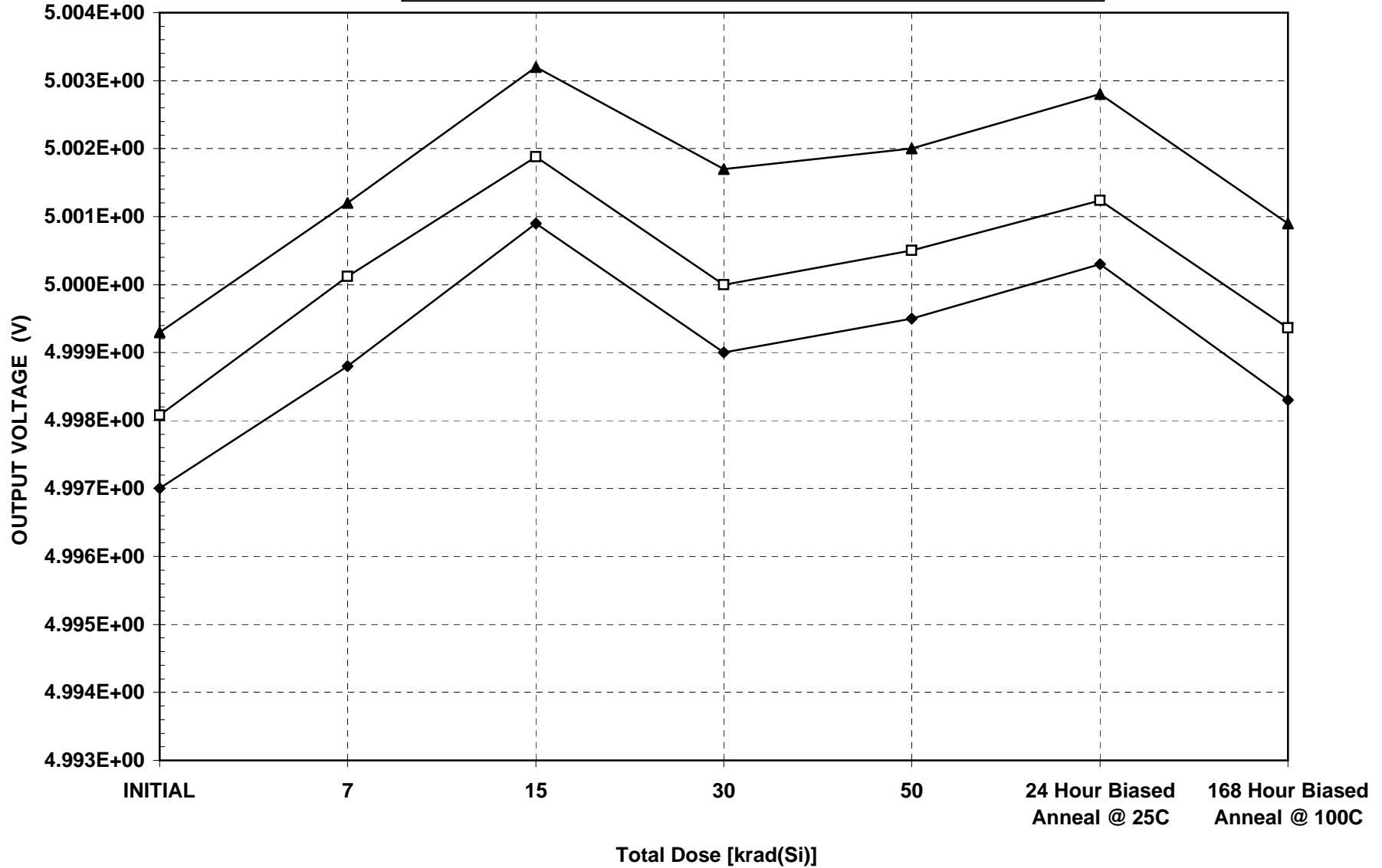
SUPPLY CURRENT (mA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 5V REF (LTC) UNBIASED
I C S Radiation Test Results Log # 1591 5/24/07

OUTPUT VOLTAGE (V)

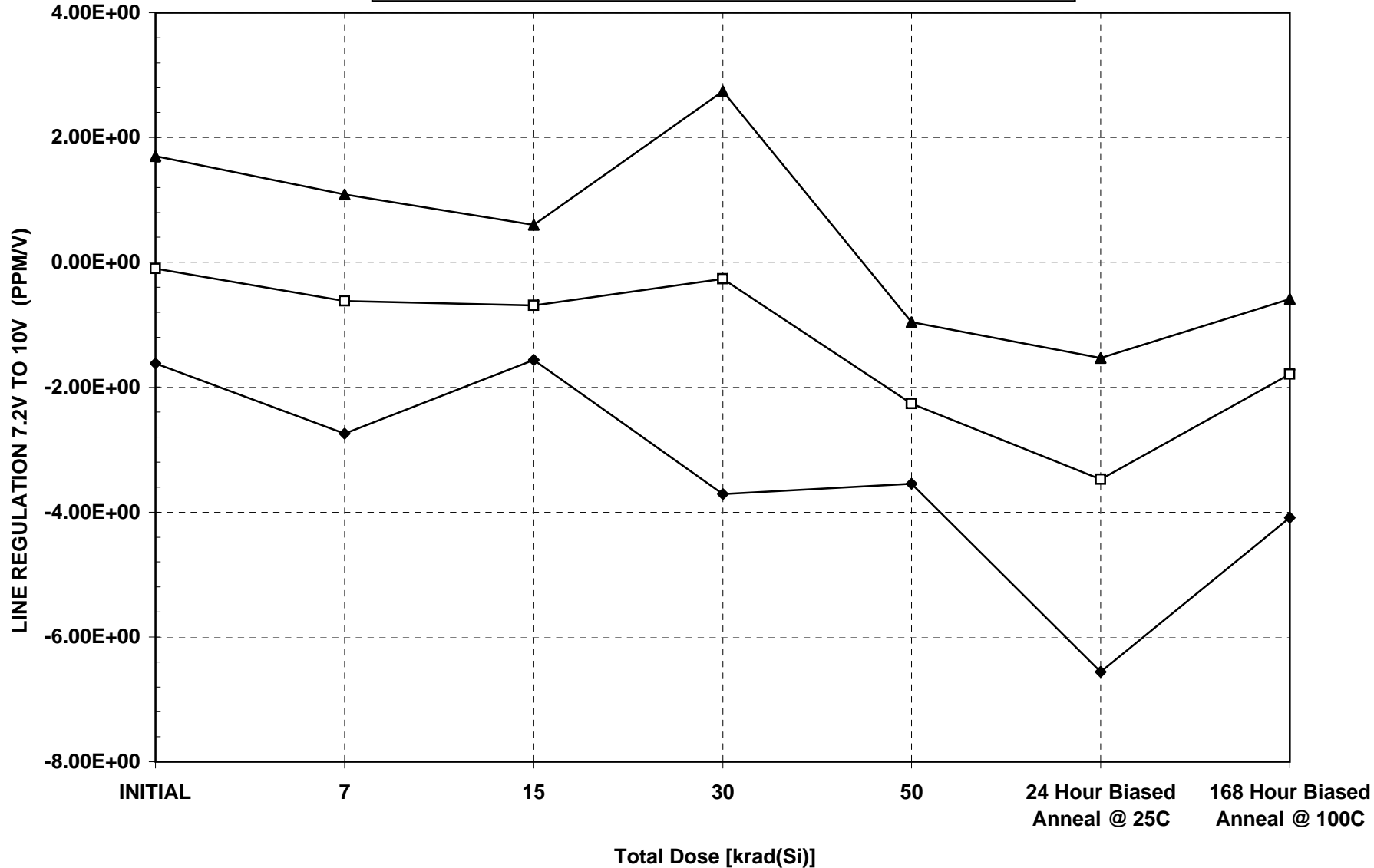


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 5V REF (LTC) UNBIASED

IC S Radiation Test Results Log # 1591 5/24/07

LINE REGULATION 7.2V TO 10V (PPM/V)

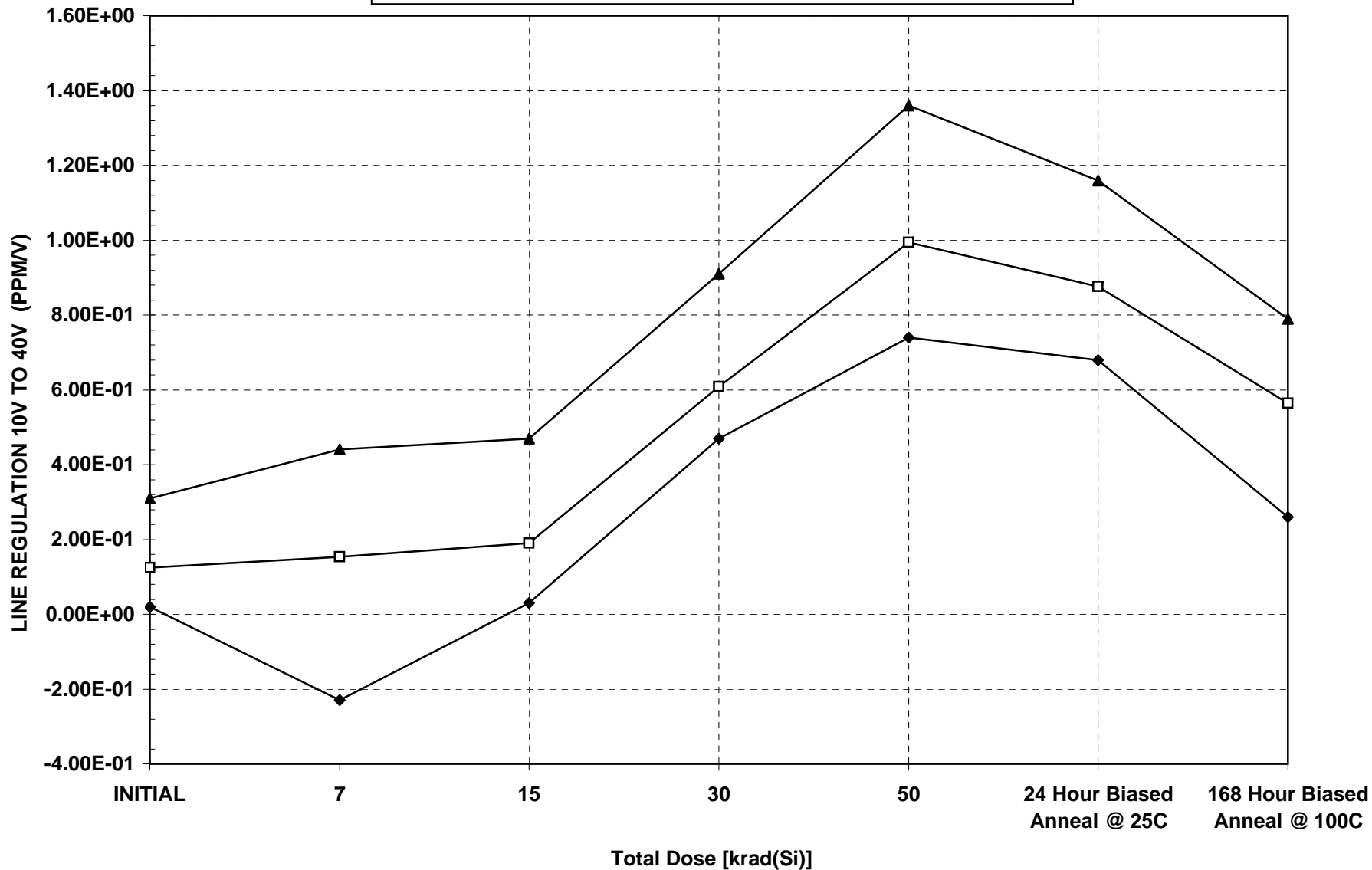


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 5V REF (LTC) UNBIASED

IC S Radiation Test Results Log # 1591 5/24/07

LINE REGULATION 10V TO 40V (PPM/V)

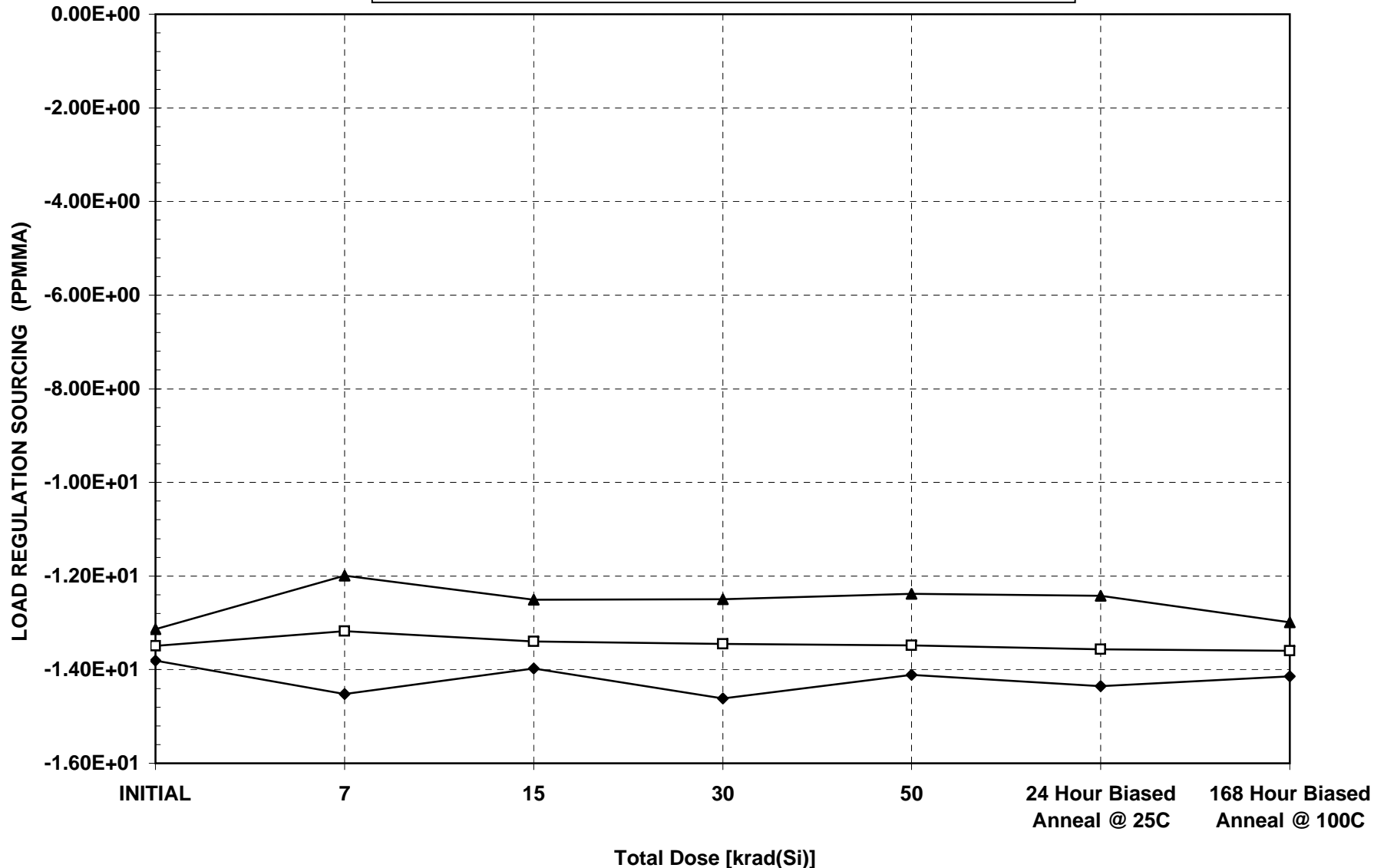


◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 5V REF (LTC) UNBIASED

IC S Radiation Test Results Log # 1591 5/24/07

LOAD REGULATION SOURCING (PPMMA)



◆ MINIMUM □ MEAN ▲ MAXIMUM

RH1021CMH-5 5V REF (LTC) UNBIASED

IC S Radiation Test Results Log # 1591 5/24/07

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