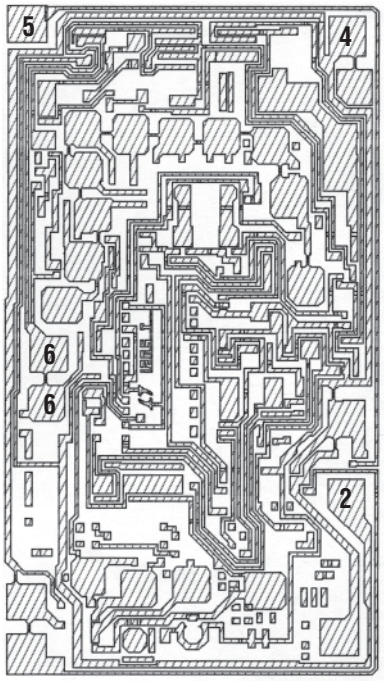
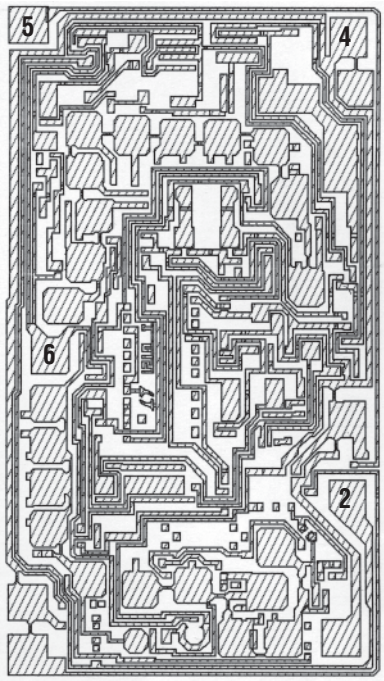
RH1021C
Precision Reference

RH1021C-5



94 × 55 mils

RH1021C-10



94 × 55 mils

PAD FUNCTION

2. Input
4. Ground
5. Trim
6. Output

DIE CROSS REFERENCE

LTC Finished Part Number	Order DICE CANDIDATE Part Number Below
RH1021C-5 RH1021C-10	RH1021C-5 DICE RH1021C-10 DICE

DICE ELECTRICAL TEST LIMITS

V_S = 10V, I_{OUT} = 0, T_A = 25°C unless otherwise noted.

PARAMETER	CONDITIONS	RH1021C-5 MIN	RH1021C-5 MAX	UNITS
Output Voltage (Note 1)	RH1021C-5	4.9975	5.0025	V
Line Regulation (Note 2)	7.2V ≤ V_{IN} ≤ 10V 10V ≤ V_{IN} ≤ 40V		12 6	ppm/V ppm/V
Load Regulation (Sourcing Current)	0 ≤ I_{OUT} ≤ 10mA (Note 2)		440	ppm/mA
Load Regulation (Sinking Current)	0 ≤ I_{OUT} ≤ 10mA (Note 2)		440	ppm/mA
Supply Current			1.2	mA

V_S = 15V, I_{OUT} = 0, T_A = 25°C unless otherwise noted.

PARAMETER	CONDITIONS	RH1021C-10 MIN	RH1021C-10 MAX	UNITS
Output Voltage (Note 1)	RH1021C-10	9.995	10.005	V
Line Regulation (Note 2)	11.5V ≤ V_{IN} ≤ 14.5V 14.5V ≤ V_{IN} ≤ 40V		15 3	ppm/V ppm/V
Load Regulation (Sourcing Current)	0 ≤ I_{OUT} ≤ 10mA (Note 2)		220	ppm/mA
Load Regulation (Shunt Mode)	1.7mA ≤ I_{SHUNT} ≤ 10mA (Notes 2, 3)		220	ppm/mA
Supply Current (Series Mode)			1.7	mA
Minimum Current (Shunt Mode)	V_{IN} is Open		1.5	mA

Note 1: Output voltage is measured immediately after turn-on. Changes due to chip warm-up are typically less than 0.005%.

Note 2: Line and load regulation are measured on a pulse basis. Output changes due to die temperature change must be taken into account separately.

Note 3: Shunt mode regulation is measured with the input open. With the input connected, shunt mode current can be reduced to 0mA. Load regulation will remain the same.

Rad Hard die require special handling as compared to standard IC chips.

Rad Hard die are susceptible to surface damage because there is no silicon nitride passivation as on standard die. Silicon nitride protects the die surface from scratches by its hard and dense properties. The passivation on Rad Hard die is silicon dioxide that is much “softer” than silicon nitride.

LTC recommends that die handling be performed with extreme care so as to protect the die surface from scratches. If the need arises to move the die around from the chip tray, use a Teflon-tipped vacuum wand. This wand can be made by pushing a small diameter Teflon tubing onto the tip of a steel-tipped wand. The inside diameter of the Teflon tip should match the die size for efficient pickup. The tip of the Teflon should be cut square and flat to ensure good vacuum to die surface. Ensure the Teflon tip remains clean from debris by inspecting under stereoscope.

During die attach, care must be exercised to ensure no tweezers touch the top of the die.

Wafer level testing is performed per the indicated specifications for dice. Considerable differences in performance can often be observed for dice versus packaged units due to the influences of packaging and assembly on certain devices and/or parameters. Please consult factory for more information on dice performance and lot qualifications via lot sampling test procedures.

Dice data sheet subject to change. Please consult factory for current revision in production.

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