

Reliability test summaries for AOP802

Item	Test	Condition	Time Point	Samples per Lot	Comment	Quantity of testing	Quantity of failures
1	Solder Reflow Precondition	1 hr Pressure Pot, 3 Cycle of IR Reflow @240°C	0 hr	80	JESD22-A113-A	80	0
2	Temperature Cycling	-65°C to + 150°C air to air	250 cyc 500cyc 1000cyc	80	MIL-STD-883	80	0
3	Pressure Pot	+121°C, 15± PSIG, RH=100%	96 hr	80	JESD22-A102-B	80	0
4	HAST	+130°C, 85± %RH, 33.3 psi Vgs=80VGS MAX	50 hr 100hr	80	JESD22-A110-A	80	0
5	HTRB	Ta=150°C Vgs=80% VDS MAX	168 hr 500 hr 1000hr	80		80	0
6	HTGB	Ta=150°C Vgs=100% VGSMAX	168 hr 500 hr 1000hr	80		80	0
7	DPA	Internal Vision Cross-section X-Ray	N/A	15	un-mode devices mold devices information only	15	0
			N/A	5		5	0
			N/A	5		5	0
8	C-SAM		N/A	5		5	0
9	Bond Integrity	Room Temp	0 hr	40 wires	MIL-STD-883 M20117	40	0
		150°C Bake	250 hr	40 wires		40	0
		150°C Bake	500 hr	40 wires		40	0
10	Solderability	230±°C, 5 sec	8 hr	15 leads	MIL-STD-883 M2003	15	0
11	Die Shear		0 hr	10	MIL-STD-883 M2019	10	0

Part Number: AOP802
 Package Type: Dual N-Channel Enhancement Mode Field Effect Transistor
 Wafer ID: FA38-5835/4.1
 Test Name and Conditions: HTGB: N-CH VDS=0V,VGS=20V, T=150C

Item Name	1 IGSS	2 IGSS	3 IDSS	4 BVDSS	5 VTH	6 RDON	7 RDON	8 VDSON
Serial#								
1	1.40E-09	1.25E-08	5.63E-09	6.13E+01	2.33E+00	1.73E-02	2.11E-02	7.34E-01
2	4.50E-09	1.29E-08	4.81E-09	6.25E+01	2.35E+00	1.74E-02	2.12E-02	7.35E-01
3	1.03E-08	1.02E-08	1.79E-09	6.13E+01	2.33E+00	1.73E-02	2.10E-02	7.35E-01
4	9.80E-09	1.26E-08	9.49E-10	6.15E+01	2.33E+00	1.72E-02	2.11E-02	7.35E-01
5	1.07E-08	1.07E-08	2.26E-09	6.18E+01	2.37E+00	1.72E-02	2.11E-02	7.36E-01
6	5.90E-09	1.15E-08	4.14E-09	6.12E+01	2.33E+00	1.73E-02	2.10E-02	7.35E-01
7	9.90E-09	1.15E-08	3.36E-09	6.11E+01	2.33E+00	1.74E-02	2.12E-02	7.34E-01
8	1.03E-08	1.02E-08	1.09E-09	6.15E+01	2.33E+00	1.73E-02	2.11E-02	7.34E-01
9	9.20E-09	1.17E-08	1.12E-09	6.14E+01	2.34E+00	1.73E-02	2.11E-02	7.34E-01
10	5.90E-09	9.40E-09	3.39E-09	6.19E+01	2.31E+00	1.74E-02	2.10E-02	7.34E-01
11	1.04E-08	1.17E-08	3.04E-09	6.16E+01	2.34E+00	1.71E-02	2.10E-02	7.36E-01
12	6.70E-09	1.18E-08	3.03E-09	6.14E+01	2.35E+00	1.73E-02	2.11E-02	7.35E-01
13	1.06E-08	1.17E-08	3.14E-09	6.17E+01	2.37E+00	1.73E-02	2.11E-02	7.35E-01
14	3.80E-09	1.11E-08	5.06E-09	6.19E+01	2.32E+00	1.72E-02	2.11E-02	7.35E-01
15	1.04E-08	1.03E-08	1.53E-09	6.22E+01	2.31E+00	1.73E-02	2.10E-02	7.34E-01
16	1.08E-08	1.25E-08	3.66E-09	6.27E+01	2.35E+00	1.75E-02	2.12E-02	7.34E-01
17	1.00E-09	1.10E-08	5.34E-09	6.18E+01	2.33E+00	1.71E-02	2.11E-02	7.36E-01
18	9.80E-09	1.23E-08	4.12E-09	6.31E+01	2.31E+00	1.73E-02	2.14E-02	7.36E-01
19	1.70E-09	1.16E-08	5.35E-09	6.20E+01	2.31E+00	1.73E-02	2.09E-02	7.34E-01
20	9.20E-09	1.22E-08	4.37E-09	6.14E+01	2.35E+00	1.72E-02	2.10E-02	7.35E-01
21	9.30E-09	1.22E-08	1.30E-09	6.30E+01	2.29E+00	1.74E-02	2.15E-02	7.35E-01
22	2.10E-09	1.09E-08	5.10E-09	6.19E+01	2.32E+00	1.72E-02	2.11E-02	7.35E-01
23	8.80E-09	1.02E-08	2.73E-09	6.16E+01	2.33E+00	1.73E-02	2.11E-02	7.35E-01
24	3.10E-09	6.80E-09	3.17E-09	6.13E+01	2.36E+00	1.73E-02	2.11E-02	7.36E-01
25	1.90E-09	6.40E-09	4.13E-09	6.15E+01	2.36E+00	1.72E-02	2.10E-02	7.36E-01
26	4.80E-09	6.30E-09	2.14E-09	6.21E+01	2.35E+00	1.73E-02	2.11E-02	7.35E-01
27	1.70E-09	1.18E-08	5.41E-09	6.30E+01	2.35E+00	1.74E-02	2.15E-02	7.36E-01
28	1.00E-09	1.20E-08	5.46E-09	6.29E+01	2.36E+00	1.75E-02	2.15E-02	7.35E-01
29	7.50E-09	1.13E-08	3.54E-09	6.25E+01	2.31E+00	1.75E-02	2.11E-02	7.34E-01
30	8.70E-09	1.10E-08	3.21E-09	6.17E+01	2.31E+00	1.73E-02	2.10E-02	7.34E-01
31	7.70E-09	1.21E-08	3.46E-09	6.18E+01	2.34E+00	1.72E-02	2.11E-02	7.34E-01
32	3.90E-09	1.14E-08	4.75E-09	6.25E+01	2.35E+00	1.74E-02	2.13E-02	7.34E-01
33	1.20E-09	1.12E-08	6.15E-09	6.13E+01	2.32E+00	1.73E-02	2.10E-02	7.35E-01
34	5.70E-09	1.17E-08	4.32E-09	6.34E+01	2.32E+00	1.75E-02	2.12E-02	7.35E-01
35	1.05E-08	1.26E-08	3.97E-09	6.17E+01	2.37E+00	1.72E-02	2.11E-02	7.36E-01
36	1.01E-08	1.26E-08	3.82E-09	6.13E+01	2.35E+00	1.71E-02	2.09E-02	7.35E-01
37	5.20E-09	1.01E-08	4.10E-09	6.15E+01	2.36E+00	1.72E-02	2.11E-02	7.35E-01

38	8.80E-09	8.70E-09	8.48E-10	6.15E+01	2.35E+00	1.73E-02	2.11E-02	7.35E-01
39	4.60E-09	1.20E-08	3.54E-09	6.14E+01	2.35E+00	1.72E-02	2.11E-02	7.36E-01
40	9.60E-09	1.05E-08	2.22E-09	6.16E+01	2.36E+00	1.72E-02	2.11E-02	7.37E-01
41	7.10E-09	1.00E-08	3.09E-09	6.17E+01	2.37E+00	1.72E-02	2.10E-02	7.35E-01
42	1.00E-08	1.03E-08	7.03E-10	6.26E+01	2.37E+00	1.73E-02	2.10E-02	7.35E-01
43	3.90E-09	1.15E-08	4.82E-09	6.22E+01	2.36E+00	1.72E-02	2.11E-02	7.36E-01
44	1.00E-09	1.05E-08	5.05E-09	6.13E+01	2.33E+00	1.69E-02	2.12E-02	7.37E-01
45	1.10E-09	1.11E-08	4.97E-09	6.24E+01	2.36E+00	1.73E-02	2.10E-02	7.35E-01
46	1.04E-08	9.70E-09	1.29E-09	6.17E+01	2.37E+00	1.72E-02	2.10E-02	7.36E-01
47	2.40E-09	1.03E-08	4.35E-09	6.24E+01	2.36E+00	1.72E-02	2.11E-02	7.36E-01
48	6.50E-09	7.00E-09	7.70E-10	6.15E+01	2.31E+00	1.73E-02	2.11E-02	7.35E-01
49	2.60E-09	6.20E-09	2.30E-09	6.17E+01	2.32E+00	1.71E-02	2.10E-02	7.36E-01
50	3.30E-09	5.90E-09	1.76E-09	6.29E+01	2.30E+00	1.74E-02	2.14E-02	7.36E-01
51	4.80E-09	5.90E-09	1.52E-09	6.30E+01	2.28E+00	1.74E-02	2.15E-02	7.36E-01
52	4.30E-09	6.70E-09	2.62E-09	6.17E+01	2.32E+00	1.72E-02	2.11E-02	7.36E-01
53	2.70E-09	6.40E-09	2.79E-09	6.15E+01	2.32E+00	1.72E-02	2.10E-02	7.36E-01
54	5.30E-09	6.90E-09	1.79E-09	6.14E+01	2.33E+00	1.75E-02	2.12E-02	7.35E-01
55	1.80E-09	6.50E-09	3.80E-09	6.16E+01	2.32E+00	1.72E-02	2.09E-02	7.35E-01
56	1.70E-09	7.10E-09	4.04E-09	6.26E+01	2.34E+00	1.74E-02	2.10E-02	7.35E-01
57	5.30E-09	6.50E-09	1.21E-09	6.17E+01	2.37E+00	1.72E-02	2.10E-02	7.36E-01
58	5.60E-09	5.90E-09	8.09E-10	6.13E+01	2.34E+00	1.73E-02	2.10E-02	7.35E-01
59	3.80E-09	6.20E-09	2.22E-09	6.13E+01	2.35E+00	1.73E-02	2.11E-02	7.36E-01
60	1.10E-09	1.14E-08	5.77E-09	6.15E+01	2.36E+00	1.71E-02	2.10E-02	7.36E-01
61	9.00E-09	1.13E-08	6.98E-10	6.28E+01	2.30E+00	1.74E-02	2.10E-02	7.34E-01
62	1.80E-09	1.12E-08	4.78E-09	6.34E+01	2.28E+00	1.76E-02	2.13E-02	7.34E-01
63	9.00E-10	1.06E-08	4.88E-09	6.24E+01	2.29E+00	1.72E-02	2.08E-02	7.34E-01
64	5.40E-09	1.04E-08	3.62E-09	6.17E+01	2.31E+00	1.72E-02	2.09E-02	7.34E-01
65	9.30E-09	1.01E-08	1.53E-09	6.13E+01	2.33E+00	1.73E-02	2.10E-02	7.34E-01
66	1.05E-08	1.08E-08	4.48E-10	6.29E+01	2.34E+00	1.74E-02	2.11E-02	7.36E-01
67	2.50E-09	1.39E-08	4.85E-09	6.19E+01	2.36E+00	1.73E-02	2.10E-02	7.36E-01
68	4.30E-09	1.28E-08	4.16E-09	6.14E+01	2.36E+00	1.74E-02	2.11E-02	7.36E-01
69	6.80E-09	1.17E-08	3.24E-09	6.12E+01	2.34E+00	1.73E-02	2.10E-02	7.36E-01
70	5.30E-09	1.25E-08	4.21E-09	6.13E+01	2.36E+00	1.73E-02	2.11E-02	7.36E-01
71	2.40E-09	1.32E-08	5.08E-09	6.17E+01	2.35E+00	1.72E-02	2.11E-02	7.36E-01
72	3.20E-09	1.30E-08	5.03E-09	6.14E+01	2.35E+00	1.72E-02	2.09E-02	7.35E-01
73	9.80E-09	1.08E-08	2.12E-09	6.16E+01	2.36E+00	1.73E-02	2.12E-02	7.36E-01
74	3.00E-09	1.13E-08	5.44E-09	6.22E+01	2.29E+00	1.74E-02	2.13E-02	7.35E-01
75	1.06E-08	1.04E-08	1.34E-09	6.23E+01	2.36E+00	1.73E-02	2.11E-02	7.35E-01
76	9.00E-09	1.23E-08	5.64E-09	6.27E+01	2.27E+00	1.73E-02	2.16E-02	7.36E-01
77	1.06E-08	1.28E-08	1.04E-09	6.14E+01	2.32E+00	1.73E-02	2.10E-02	7.34E-01
78	1.11E-08	1.05E-08	9.86E-10	6.13E+01	2.33E+00	1.74E-02	2.11E-02	7.34E-01
79	1.12E-08	1.10E-08	8.40E-10	6.26E+01	2.31E+00	1.74E-02	2.13E-02	7.35E-01
80	3.70E-09	1.13E-08	4.35E-09	6.33E+01	2.31E+00	1.76E-02	2.13E-02	7.34E-01

Median	7.75E-09	1.14E-08	3.41E-09	6.18E+01	2.33E+00	1.73E-02	2.11E-02	7.35E-01
Min	1.00E-09	6.30E-09	1.30E-09	6.13E+01	2.29E+00	1.71E-02	2.09E-02	7.34E-01
Max	1.08E-08	1.25E-08	5.35E-09	6.31E+01	2.37E+00	1.75E-02	2.15E-02	7.36E-01
STD DEV	3.76E-09	2.13E-09	1.29E-09	5.47E-01	2.41E-02	8.90E-05	1.53E-04	7.19E-04