

Engineering Development Model

Power Splitter/Combiner
2 Way-0°

TCP-ED8262/3

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : DB714

ELECTRICAL SPECIFICATIONS 75Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		3		1500 MHz
Isolation	3 - 30 MHz		25	dB
	30 - 750 MHz		29	dB
	750 - 1500 MHz		23	dB
Total Loss Above 3.0 dB	3 - 30 MHz		0.31	dB
	30 - 750 MHz		0.31	dB
	750 - 1500 MHz		0.76	dB
Amplitude Unbalance	3 - 30 MHz		0.365	dB
	30 - 750 MHz		0.123	dB
	750 - 1500 MHz		0.096	dB
VSWR	SUM Port		1.16	(:1)
	OUT Ports		1.25	(:1)

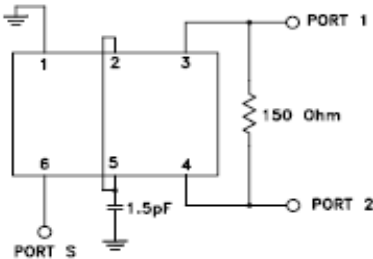
Note: Denotes 75 Ohm model, for coax connector models 75 Ohm BNC connectors are standard.

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1
CONNECT	2, 5
EXT. RESISTOR 150Ω	3, 4
EXT. CAPACITOR 1.5pF	2 OR 5 TO GND

Functional Diagram

electrical schematic



Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCStore/terms.jsp



2 Way-0° Power Splitter/Combiner

TCP-ED8262/3

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2				S	1	2
3.0	3.14	3.68	0.54	22.61	3.0	1.06	1.20	1.48
5.0	3.13	3.50	0.37	24.98	5.0	1.04	1.17	1.36
7.0	3.13	3.43	0.29	26.43	7.0	1.03	1.16	1.30
10.0	3.12	3.38	0.26	27.65	10.0	1.02	1.15	1.26
50.0	3.14	3.37	0.23	28.99	50.0	1.02	1.15	1.21
100.0	3.16	3.38	0.22	28.67	100.0	1.04	1.14	1.20
150.0	3.19	3.38	0.19	28.38	150.0	1.07	1.14	1.19
200.0	3.21	3.40	0.19	28.11	200.0	1.09	1.15	1.19
250.0	3.23	3.37	0.14	27.94	250.0	1.11	1.18	1.19
300.0	3.25	3.38	0.14	27.92	300.0	1.14	1.20	1.18
350.0	3.26	3.34	0.08	28.06	350.0	1.16	1.22	1.18
400.0	3.28	3.33	0.05	28.37	400.0	1.17	1.21	1.17
450.0	3.30	3.30	0.00	28.80	450.0	1.19	1.21	1.17
500.0	3.32	3.27	0.04	29.42	500.0	1.20	1.20	1.16
550.0	3.35	3.28	0.06	30.08	550.0	1.21	1.23	1.17
600.0	3.37	3.24	0.12	30.57	600.0	1.22	1.25	1.17
650.0	3.40	3.29	0.10	30.55	650.0	1.23	1.28	1.18
700.0	3.41	3.27	0.14	29.83	700.0	1.22	1.30	1.19
750.0	3.46	3.32	0.14	28.56	750.0	1.23	1.31	1.21
800.0	3.46	3.32	0.15	27.04	800.0	1.22	1.31	1.22
850.0	3.53	3.38	0.16	25.55	850.0	1.22	1.30	1.22
900.0	3.54	3.40	0.14	24.10	900.0	1.21	1.30	1.23
950.0	3.63	3.46	0.16	22.90	950.0	1.21	1.32	1.23
1000.0	3.64	3.52	0.11	21.81	1000.0	1.20	1.35	1.23
1100.0	3.78	3.70	0.08	20.28	1100.0	1.18	1.40	1.26
1200.0	3.92	3.87	0.05	19.43	1200.0	1.18	1.37	1.30
1300.0	4.09	4.08	0.01	19.24	1300.0	1.21	1.36	1.33
1400.0	4.30	4.30	0.01	19.64	1400.0	1.25	1.45	1.35
1500.0	4.51	4.47	0.05	20.05	1500.0	1.29	1.54	1.37

¹ Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
TCP-ED8262/3
100707
Page 1 of 1



The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see

Mini-Circuits®

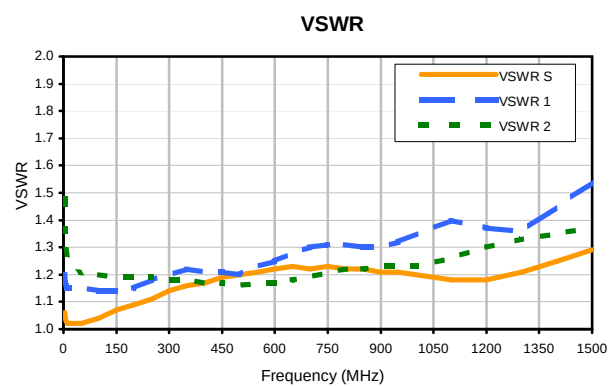
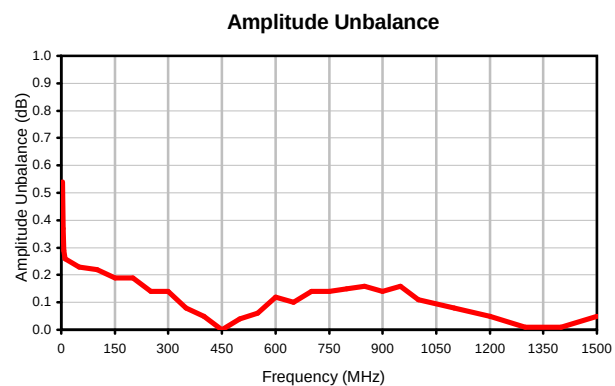
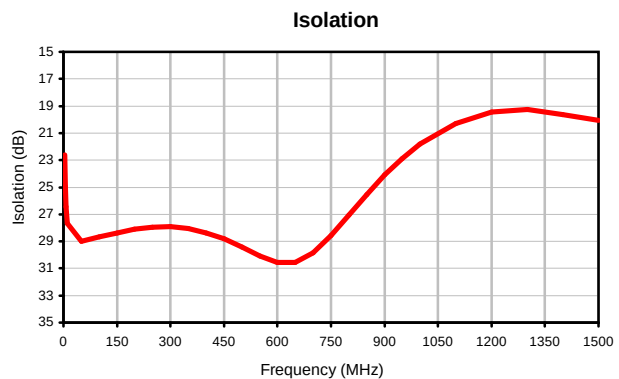
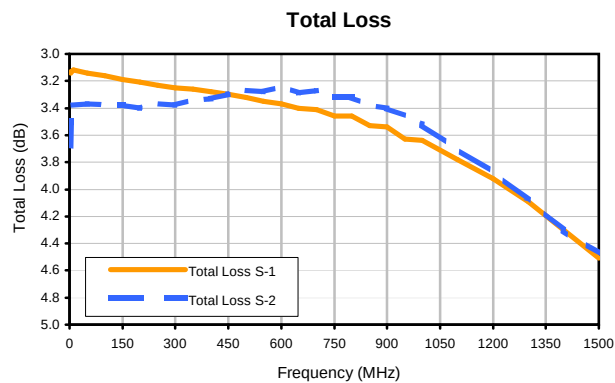
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



2 Way-0° Power Splitter/Combiner

TCP-ED8262/3

Typical Performance Curves

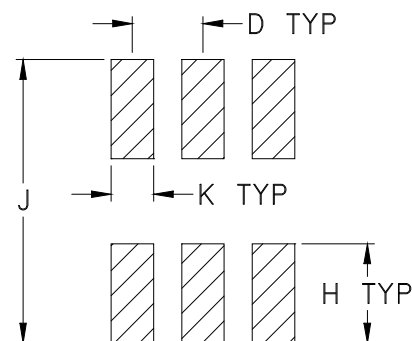
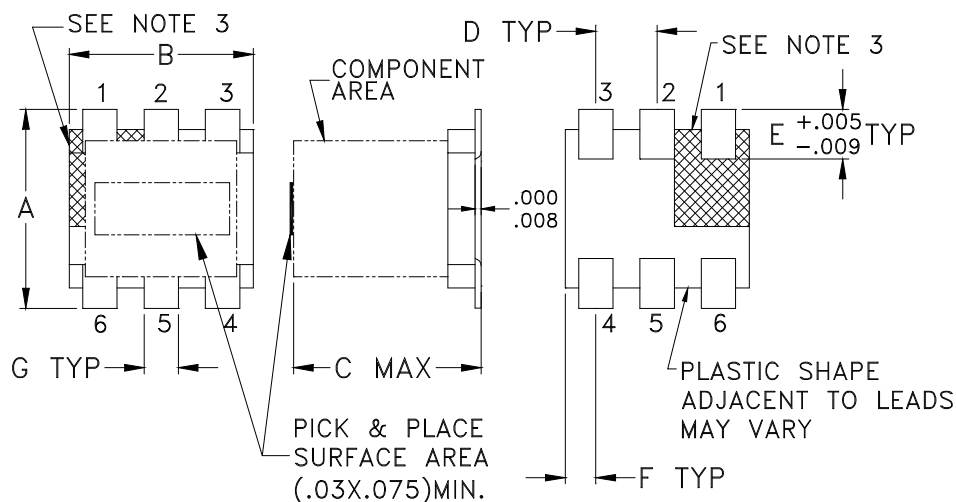


REV. X2
TCP-ED8262/3
100707
Page 1 of 1

Outline Dimensions

DB714

PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	WT. GRAM
DB714	.160 (4.06)	.150 (3.81)	.160 (4.06)	.050 (1.27)	.040 (1.02)	.025 (0.64)	.028 (0.71)	.065 (1.65)	.190 (4.83)	.030 (0.76)	.15

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3Pl. $\pm .005$

Notes:

- Case material: Plastic.
- Termination finish:
For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.
- Lead #1 identifier shall be located in the cross-hatched area shown.
Identifier may be either a molded or marked feature.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

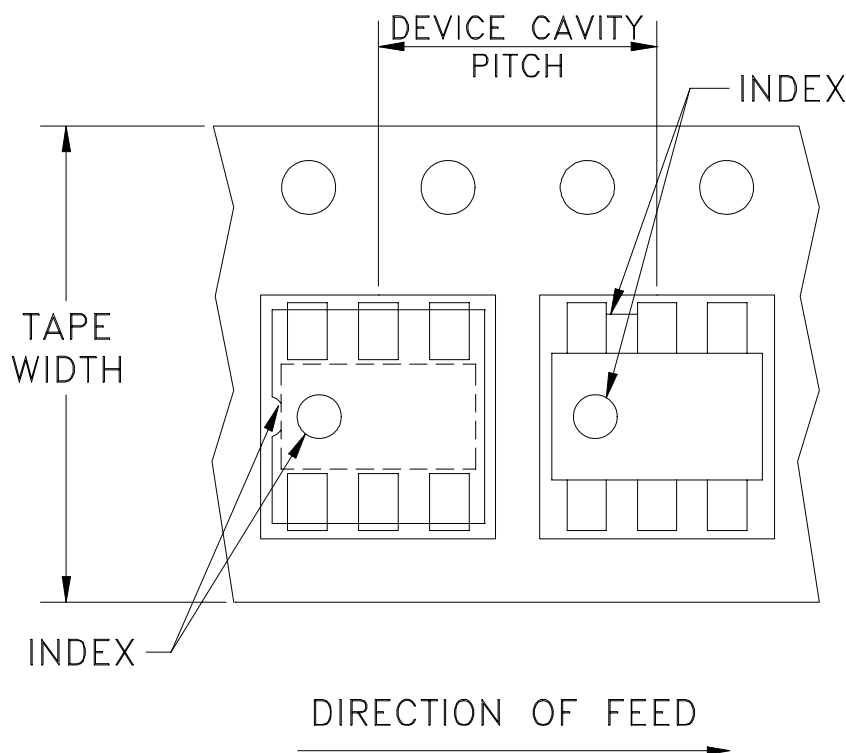


The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F47

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel see note
12	8	13	1000, 2000
		7	20, 50, 100, 200, 500

Note: Please consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



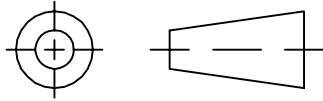
INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

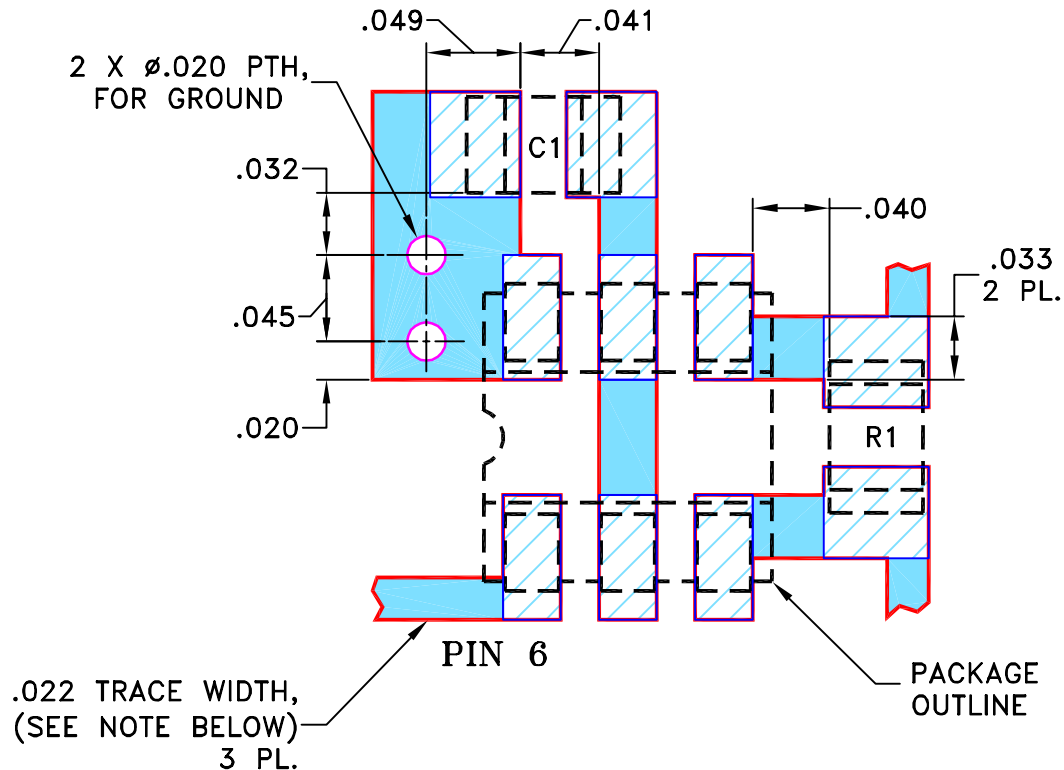
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M70611	NEW RELEASE	02/00	IL	DB
A	M71500	ADDED SOLDER MASK AMD LEGEND	04/00	IL	DB
B	M82377	UPDATED DRAWING	08/06/02	GF	HY
C	M102713	UPDATED NOTES	02/15/06	AV	HY

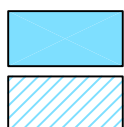
SUGGESTED MOUNTING CONFIGURATION FOR DB714 CASE STYLE, "mt" PIN CONNECTION



RESISTOR R1: 150 Ohm, 0805 SIZE
CAPACITOR C1: 1.5 pF, 0805 SIZE

NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS $0.030'' \pm 0.002''$; COPPER: 1 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

UNLESS OTHERWISE SPECIFIED	INITIALS	DATE
DRAWN	IL	02/24/00
CHECKED	DY	02/29/00
APPROVED	DB	02/29/00

Mini-Circuits®
THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI-CIRCUITS. EXCEPT FOR USE EXPRESSLY GRANTED, IN WRITING, TO ITS VENDORS, VEEDEE AND THE UNITED STATES GOVERNMENT, MINI-CIRCUITS RESERVES ALL PROPRIETARY DESIGN, USE, MANUFACTURING AND REPRODUCTION RIGHTS THERETO. THESE CONTENTS SHALL NOT BE USED, DUPLICATED OR DISCLOSED TO ANY OUTSIDE PARTY, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION OF MINI-CIRCUITS.

ASHEETA1.DWG REV:A DATE:01/12/95

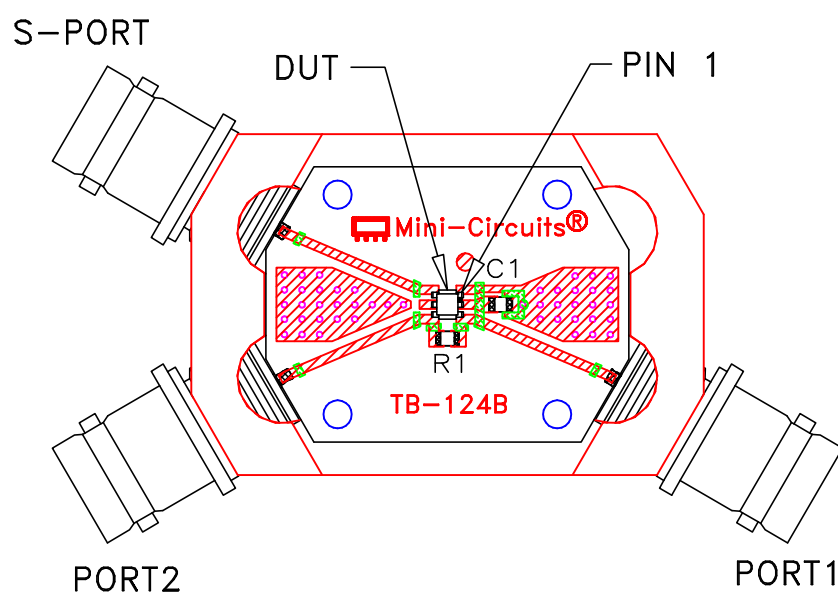


Mini-Circuits® 13 Neptune Avenue
Brooklyn NY 11235

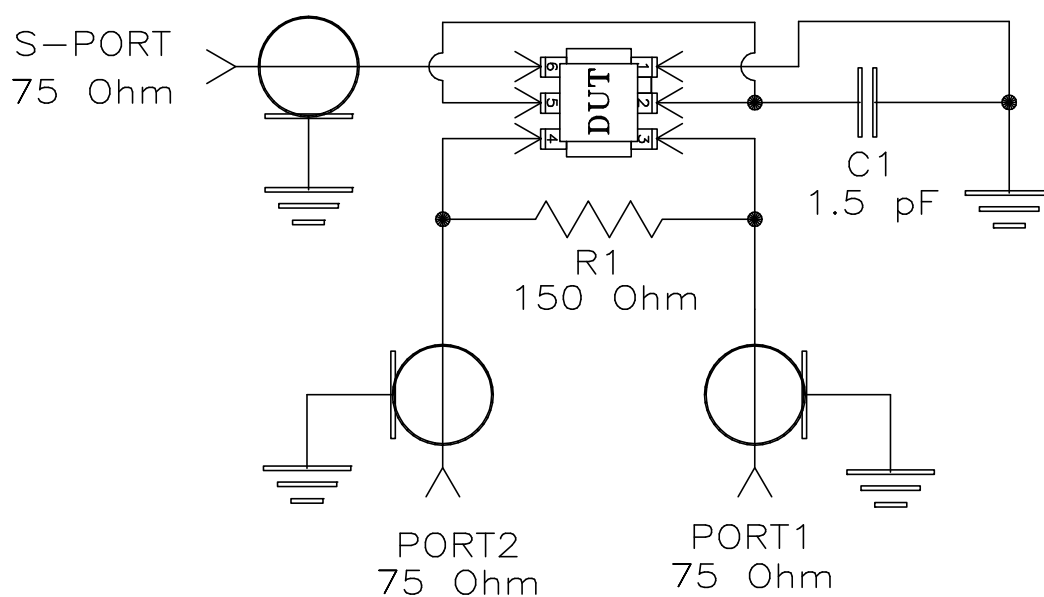
PL, mt, 75, DB714, TCP

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-002	C
FILE:	98PL002	SCALE:	10:1
		SHEET:	1 OF 1

Evaluation Board and Circuit



TB-124



Schematic Diagram

Notes:

1. 75 Ohm BNC Female connectors.
2. PCB Material: Rogers R04350 or equivalent, Dielectric Constant=3.5, Thickness=.030 inch.

 **Mini-Circuits®**



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215