

Surface Mount Matching Pad

50/75Ω

DC to 3000 MHz

Maximum Ratings

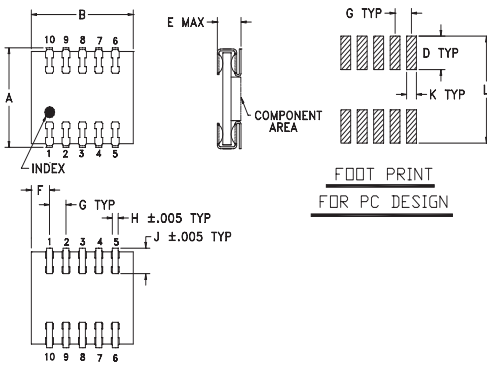
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	0.25W

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

50 OHM	2
75 OHM	6
GROUND	1,3,4,5,7,8,9,10

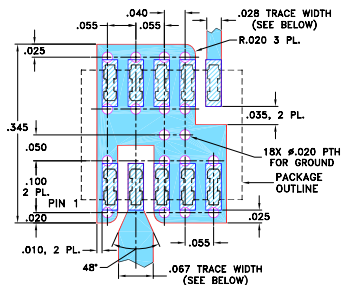
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G		
.27	.31	--	.090	.080	.055	.050		
6.86	7.87	--	2.29	2.03	1.40	1.27		
H	J	K	L				wt	
.018	.074	.030	.290				grams	
0.46	1.88	0.76	7.37				0.3	

Demo Board MCL P/N: TB-25 Suggested PCB Layout (PL-211)



- NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 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

Features

- excellent flatness, ±0.1 dB typ.
- excellent VSWR, 1.2:1 typ.
- wideband coverage, DC to 3000 MHz
- aqueous washable
- low cost

Applications

- 50 to 75 OHM wideband impedance matching

ALMP-5075+ ALMP-5075



Generic photo used for illustration purposes only

CASE STYLE: CB518

+RoHS Compliant

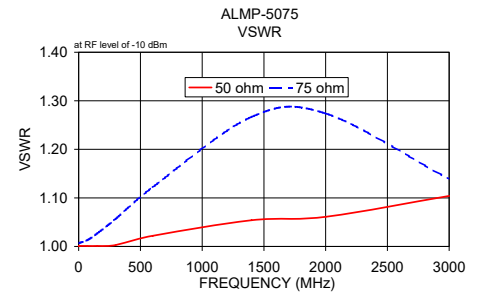
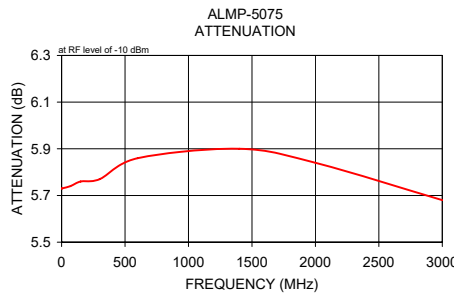
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

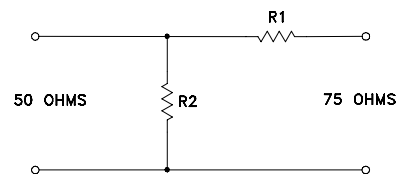
FREQ. (MHz)	ATTENUATION (dB) Flatness Max.			VSWR (:1) Max.			POWER (W)
	Nom.	DC-100 MHz	100-1000 MHz	1000-3000 MHz	DC-100 MHz	100-1000 MHz	
f_L - f_U	Nom.						
DC-3000	5.7±0.2	0.2	0.4	0.4	1.06	1.4	1.45

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)	
		50 Ω	75 Ω
0.03	5.73	1.00	1.01
0.10	5.73	1.00	1.01
1.00	5.73	1.00	1.01
70.00	5.74	1.00	1.01
150.00	5.76	1.00	1.03
300.00	5.77	1.00	1.06
600.00	5.86	1.02	1.12
1400.00	5.90	1.05	1.27
2000.00	5.84	1.06	1.27
3000.00	5.68	1.10	1.14



Electrical Schematic



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



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REV. C
M151107
ED-7340/2
ALMP-5075
DJ/TD/CP
200407

Matching Pad 50W/75W, Surface Mount

ALMP-5075+

Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	50 W RETURN LOSS (dB)	75 W RETURN LOSS (dB)
0.03	5.73	66.02	50.48
0.1	5.73	66.02	49.15
1	5.73	66.02	49.15
70	5.74	66.02	43.80
150	5.76	66.02	37.51
300	5.77	56.49	31.15
600	5.86	39.27	24.81
1400	5.90	31.60	18.58
2000	5.84	30.57	18.38
3000	5.68	26.12	23.74

REV. X1
ALMP-5075+
061115
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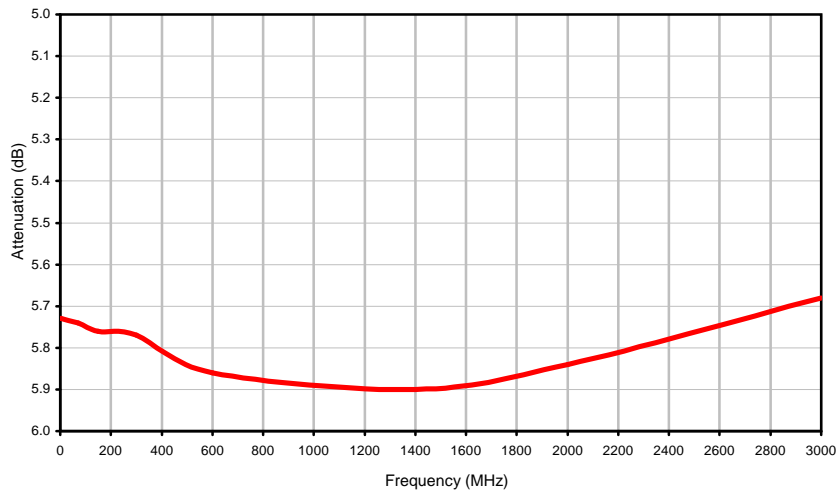


The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

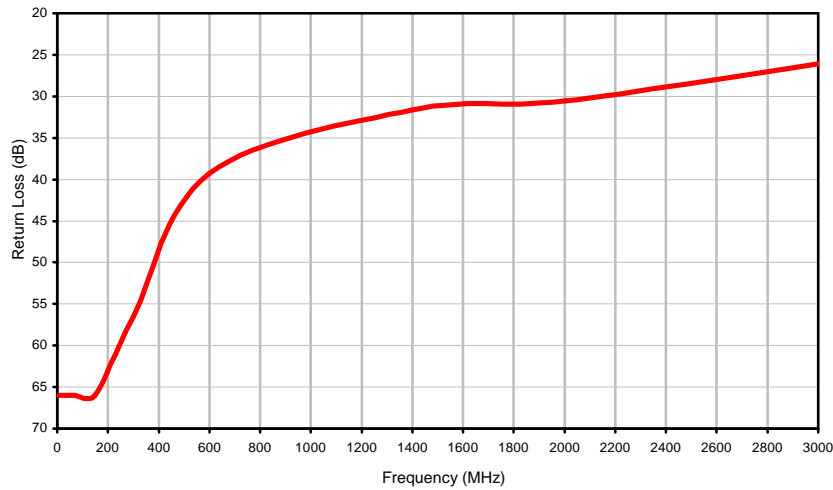


Typical Performance Curves

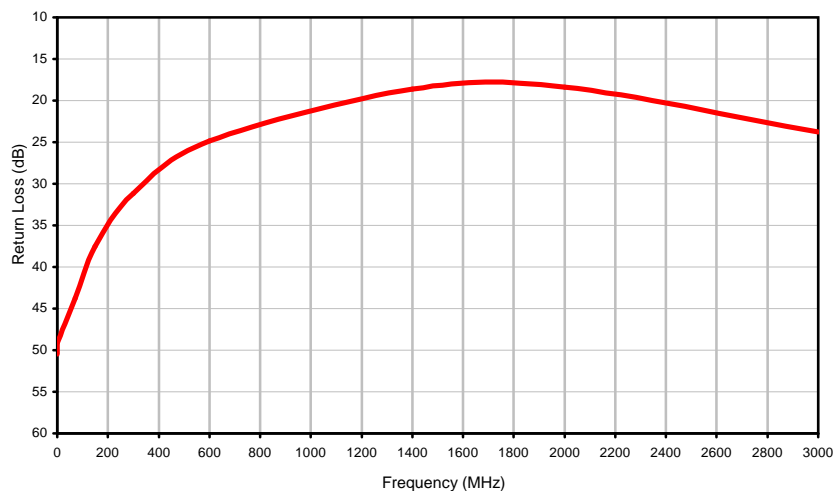
Attenuation



50 Ohm Return Loss



75 Ohm Return Loss



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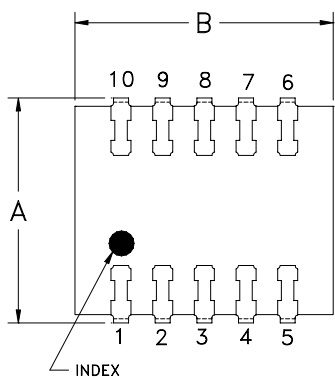


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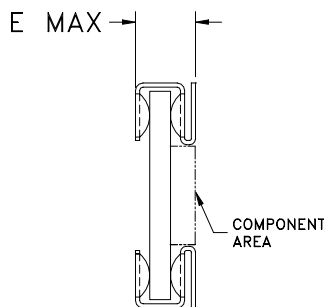


CB518
CB539

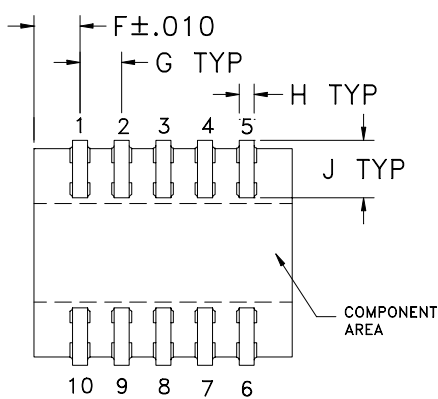
Outline Dimensions



TOP VIEW

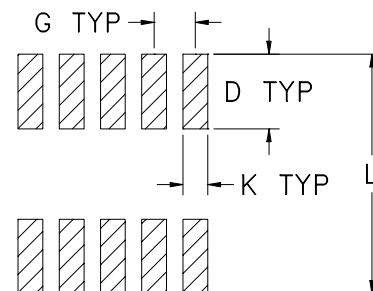


SIDE VIEW



BOTTOM VIEW

PCB Land Pattern



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

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
CB518	.27 (6.86)	.31 (7.87)	-	.090 (2.29)	.080 (2.03)	.055 (1.40)	.050 (1.27)	.018 (0.46)	.074 (1.88)	.030 (0.76)	.290 (7.37)	.3
CB539	.29 (7.36)	.30 (7.62)	-		.085 (2.16)	.050 (1.27)			.067 (1.70)		.315 (8.00)	.3

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

Notes:

- Open style, ceramic base.
- 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.

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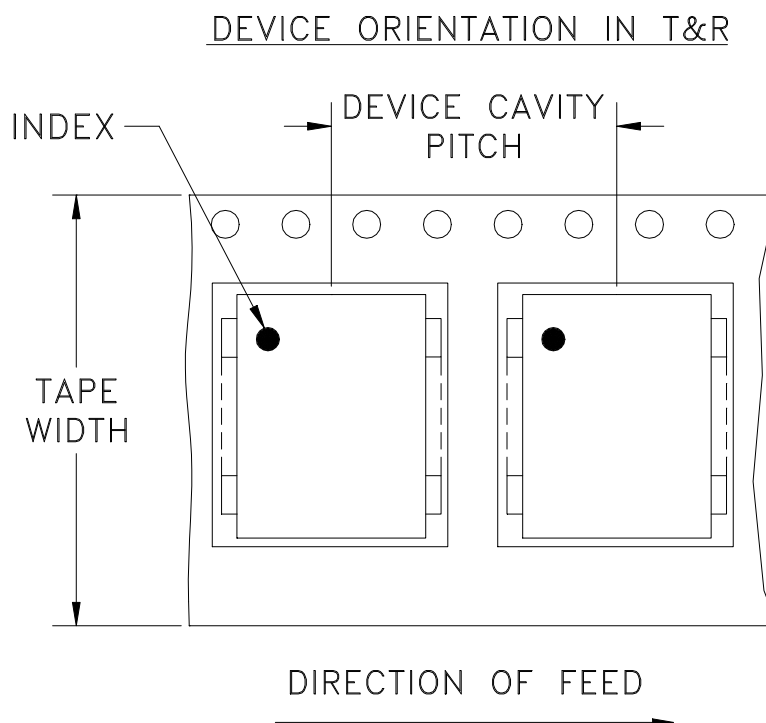
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Tape & Reel Packaging TR-F24



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
16	12	13	500

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.

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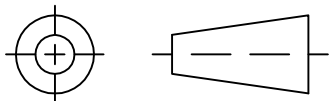
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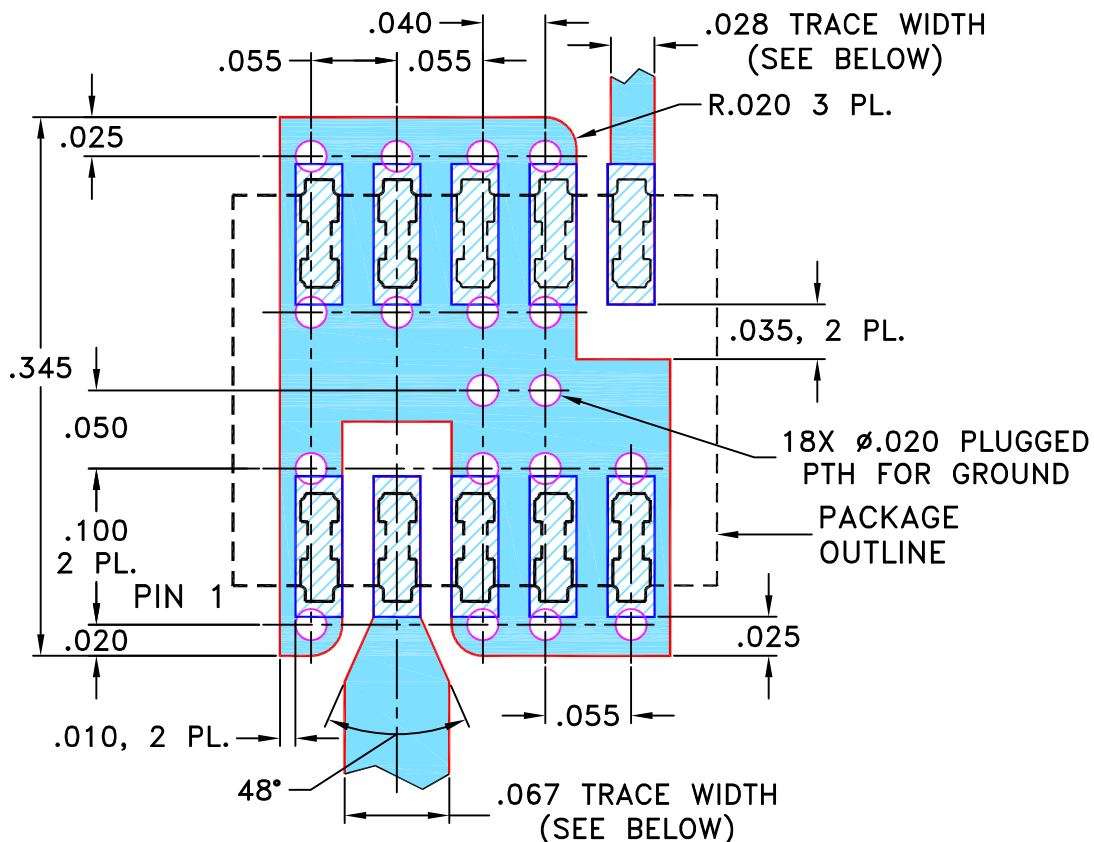
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M100736	NEW RELEASE	09/16/05	MMG	DJ
A	M102713	ADDED "...WITH SMOBC"	01/12/06	GT	IL
B	M149063	PTH DEFINED AS PLUGGED	12/16/14	ITG	DJ

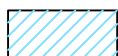
SUGGESTED MOUNTING CONFIGURATION
FOR CB518 CASE STYLE, "ml" PIN CONNECTION.



- NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 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
DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ±	DRAWN	MMG 09/09/05
	CHECKED	AV 09/16/05
	APPROVED	DJ 09/16/05



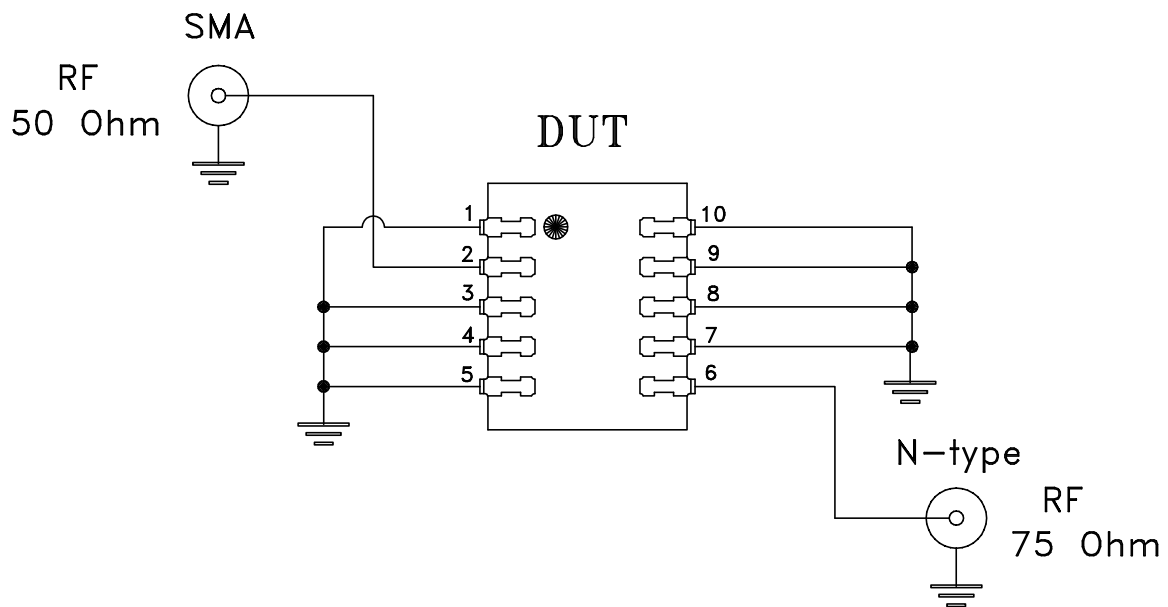
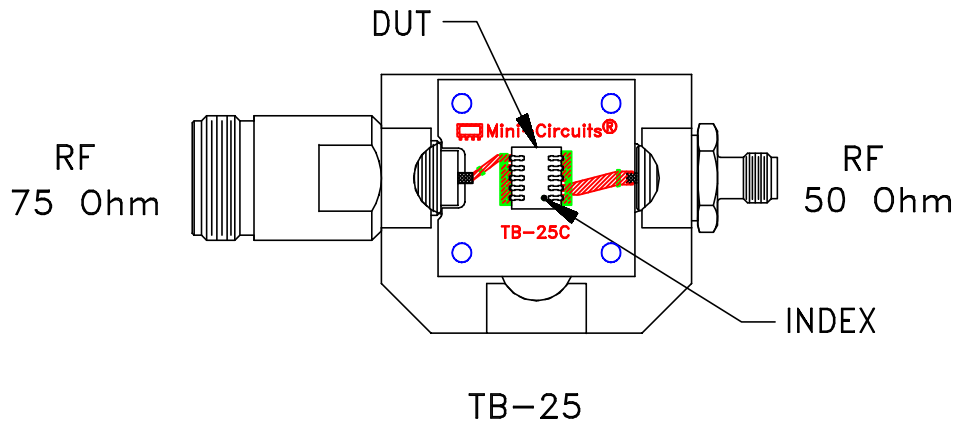
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PL, ml, CB518, ALMP-5075, TB-25

SIZE A	CODE IDENT 15542	DRAWING NO: 98-PL-211	REV: B
FILE: 98PL211	SCALE: 8:1	SHEET: 1 OF 1	

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Evaluation Board and Circuit



Schematic Diagram

Notes:

1. SMA and N Female connectors.
2. PCB Material: Rogers R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.030 inch.

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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