

Engineering Development Model

Power Splitter/Combiner

SEPS-ED13670

3 Way-0°

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 : JF1258

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

Parameter		Min.	Typ.	Max.	Units
Frequency		600		3000	MHz
Isolation	600-3000 MHz		22		dB
Insertion Loss Above 4.8 dB	600-3000 MHz		0.70		dB
Phase Unbalance	600-3000 MHz		1.27		deg.
Amplitude Unbalance	600-3000 MHz		0.15		dB
VSWR	SUM Port		1.32		(:1)
	OUT Ports		1.17		(:1)

MAXIMUM RATINGS

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS

SUM PORT	17
PORT 1	4
PORT 2	6
PORT 3	8
GND	1,2,3,5,7,9,10,11,12,13, 14,15,16,18,19,20,21,22

Functional Diagram



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IF/RF MICROWAVE COMPONENTS



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹			AMP. UNBAL. (dB)	ISOLATION			PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR			
	(dB)				(dB)					(:1)			
	S-1	S-2	S-3		1-2	1-3	2-3			S	1	2	3
600.0	5.44	5.25	5.49	0.23	17.56	15.49	17.40	0.47	600.0	1.81	1.29	1.19	1.28
700.0	5.27	5.11	5.32	0.22	21.17	16.82	20.80	0.61	700.0	1.56	1.29	1.18	1.28
750.0	5.21	5.06	5.27	0.21	23.56	17.48	22.98	0.68	750.0	1.45	1.29	1.17	1.28
800.0	5.17	5.03	5.23	0.20	26.47	18.13	25.50	0.76	800.0	1.34	1.29	1.16	1.28
900.0	5.11	4.99	5.19	0.20	32.78	19.35	30.36	0.93	900.0	1.17	1.27	1.12	1.28
1000.0	5.11	5.00	5.19	0.19	29.79	20.42	29.11	1.11	1000.0	1.03	1.25	1.09	1.26
1100.0	5.14	5.03	5.23	0.20	25.96	21.37	26.05	1.24	1100.0	1.08	1.22	1.08	1.24
1200.0	5.19	5.08	5.29	0.21	23.83	22.20	24.15	1.36	1200.0	1.16	1.18	1.09	1.20
1300.0	5.25	5.13	5.35	0.21	22.63	22.95	23.05	1.40	1300.0	1.22	1.13	1.11	1.16
1400.0	5.32	5.19	5.40	0.22	22.04	23.70	22.49	1.40	1400.0	1.25	1.08	1.13	1.11
1500.0	5.37	5.23	5.45	0.22	21.87	24.43	22.32	1.37	1500.0	1.26	1.03	1.13	1.06
1600.0	5.42	5.29	5.49	0.21	22.12	25.13	22.58	1.29	1600.0	1.24	1.01	1.13	1.02
1700.0	5.43	5.31	5.50	0.19	22.98	25.61	23.46	1.23	1700.0	1.21	1.03	1.12	1.00
1800.0	5.43	5.33	5.50	0.16	24.40	25.89	25.06	1.20	1800.0	1.14	1.04	1.11	1.00
1900.0	5.45	5.39	5.52	0.13	25.68	25.82	26.98	1.19	1900.0	1.05	1.03	1.10	1.01
2000.0	5.48	5.46	5.56	0.11	25.17	25.35	27.38	1.21	2000.0	1.09	1.05	1.10	1.05
2100.0	5.55	5.56	5.64	0.09	22.90	24.58	25.22	1.24	2100.0	1.24	1.10	1.11	1.09
2200.0	5.68	5.70	5.76	0.08	20.54	23.74	22.65	1.21	2200.0	1.41	1.17	1.13	1.15
2300.0	5.82	5.85	5.89	0.07	18.77	22.99	20.71	1.20	2300.0	1.55	1.23	1.14	1.21
2400.0	5.93	5.96	5.98	0.05	17.63	22.41	19.49	1.10	2400.0	1.65	1.29	1.13	1.26
2500.0	5.99	6.01	6.01	0.02	17.07	22.04	18.94	0.92	2500.0	1.66	1.34	1.09	1.30
2600.0	5.98	5.99	5.97	0.02	17.08	21.84	19.04	0.89	2600.0	1.59	1.36	1.03	1.33
2700.0	5.91	5.93	5.88	0.06	17.62	21.67	19.83	1.16	2700.0	1.45	1.36	1.06	1.33
2800.0	5.83	5.88	5.78	0.10	18.55	21.38	21.10	1.72	2800.0	1.28	1.34	1.16	1.32
2900.0	5.77	5.89	5.73	0.16	19.25	20.71	21.71	2.64	2900.0	1.17	1.30	1.26	1.29
3000.0	5.78	6.01	5.76	0.25	18.75	19.52	20.18	3.61	3000.0	1.26	1.26	1.36	1.26

¹Total Loss = Insertion Loss + 4.8dB Splitter Loss



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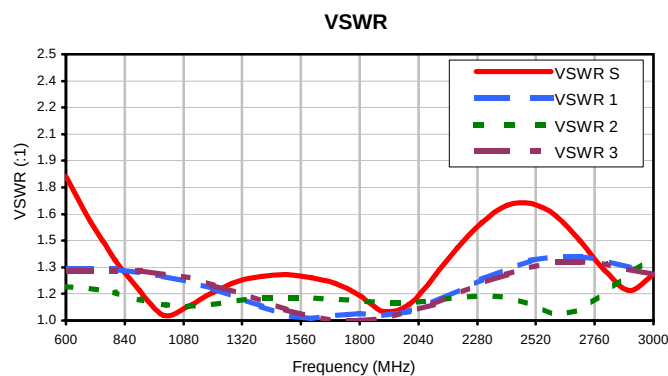
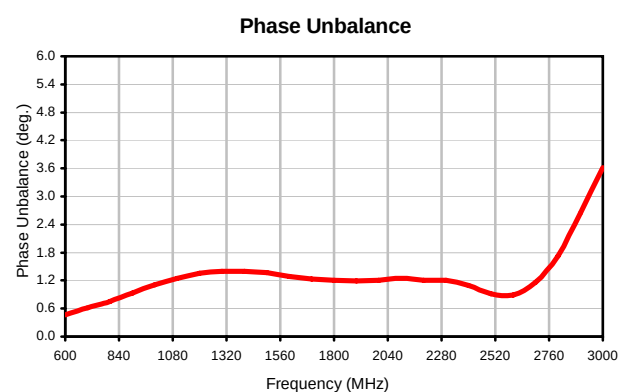
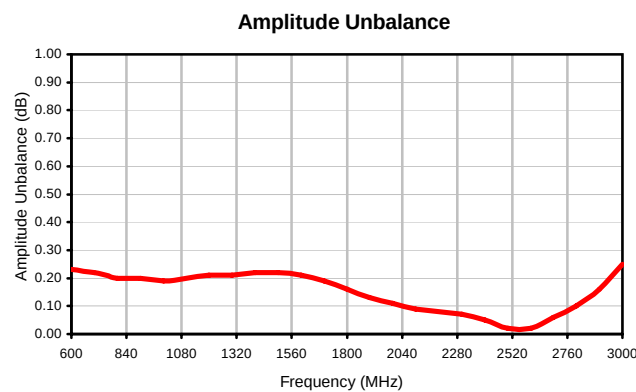
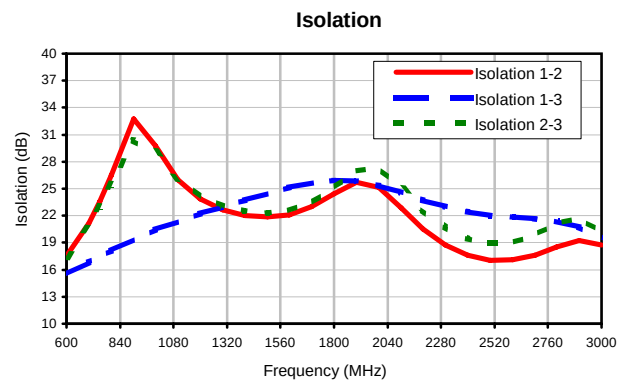
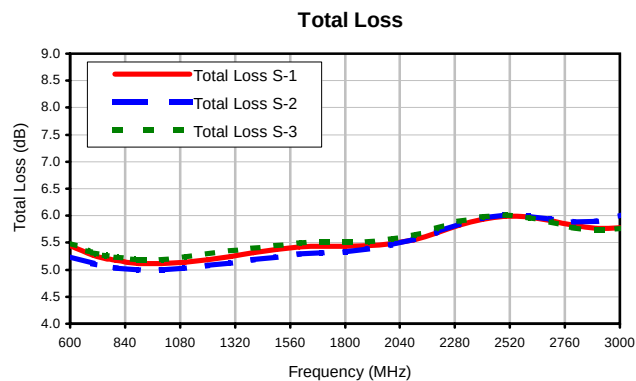
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Typical Performance Curves



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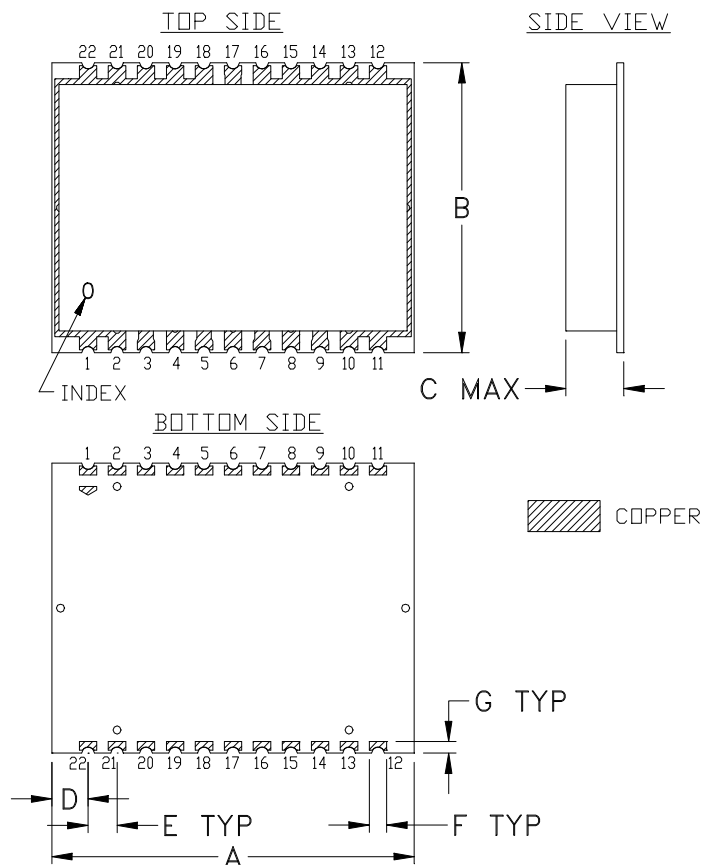


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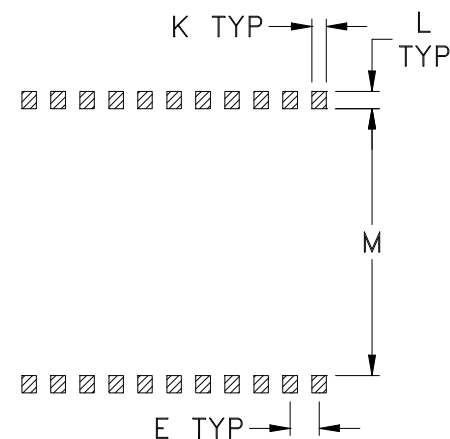
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Outline Dimensions



PCB Land Pattern



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

CASE #	A	B	C	D	E	F	G	H	J	K	L	M	WT. GRAM
JF1258	1.250 (31.75)	1.000 (25.40)	.200 (5.08)	.125 (3.17)	.100 (2.54)	.060 (1.52)	.040 (1.02)	-	-	.050 (1.27)	.060 (1.52)	.920 (23.37)	4.4

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3Pl. $\pm .015$

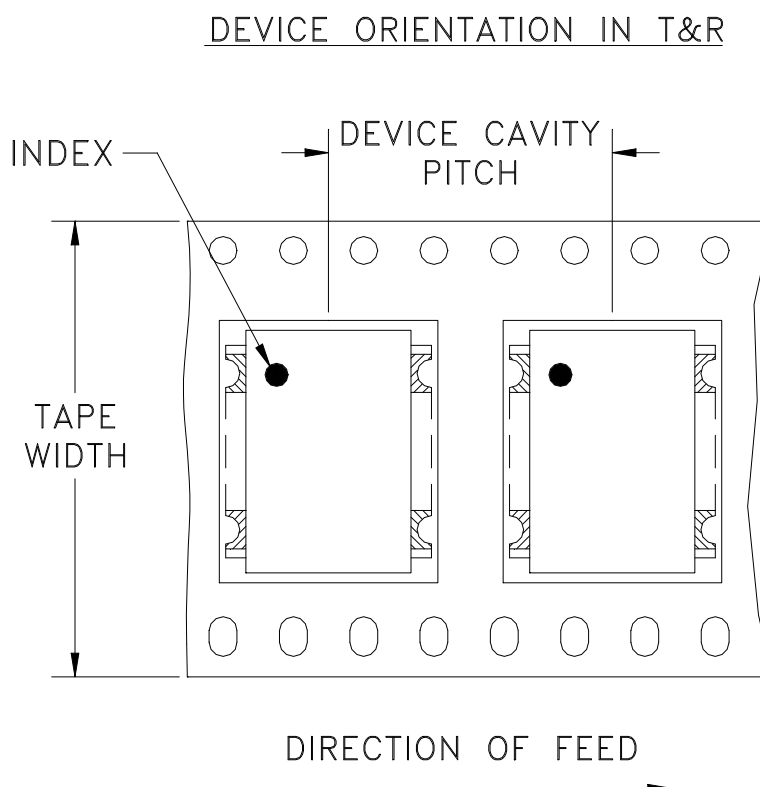
Notes:

- Case material: Nickel-Silver alloy.
- Base: Printed wiring laminate.
- Termination finish:
For RoHS Case Styles: 3-5 μ inch (.08-.13 μ m) Gold over 120-240 μ inch (3-6 μ m) Nickel plate.
All models, (+) suffix.

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Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
44	32	13	125

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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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