

Engineering Development Model

Power Splitter/Combiner

RPSC-ED13768

2 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 : CK605-1

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		30		90 MHz
Isolation	30-90 MHz		17	dB
Insertion Loss Above 3.0 dB	30-90 MHz		0.38	dB
Phase Unbalance	30-90 MHz		63	deg.
Amplitude Unbalance	30-90 MHz		0.30	dB
VSWR	SUM Port		1.29	(:1)
	OUT Ports		1.25	(:1)

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

PIN CONNECTIONS	
SUM PORT	14
PORT 1	2
PORT 2	10
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Functional Diagram



P.O. Box 350188, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4851 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/MICROWAVE COMPONENTS



REV. X1
RPSC-ED13768
10/9/2009
Page 1 of 1

2 Way-0° Power Splitter/Combiner

RPSC-ED13768

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB) 1-2	PHASE UNBALANCE (Deg)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
32.0	3.20	3.54	0.34	9.24	65.08	32.0	1.36	1.50	1.80
34.0	3.31	3.43	0.12	9.75	62.74	34.0	1.37	1.49	1.63
36.0	3.38	3.35	0.03	10.34	60.71	36.0	1.37	1.47	1.49
38.0	3.42	3.29	0.13	11.01	59.00	38.0	1.36	1.44	1.38
40.0	3.44	3.25	0.18	11.76	57.60	40.0	1.35	1.41	1.28
42.0	3.43	3.23	0.20	12.60	56.54	42.0	1.33	1.38	1.21
44.0	3.42	3.22	0.20	13.53	55.78	44.0	1.30	1.34	1.15
46.0	3.40	3.21	0.19	14.58	55.29	46.0	1.27	1.30	1.09
48.0	3.37	3.21	0.16	15.78	55.07	48.0	1.24	1.26	1.05
50.0	3.34	3.21	0.13	17.16	55.08	50.0	1.21	1.22	1.02
52.0	3.32	3.22	0.10	18.80	55.32	52.0	1.18	1.18	1.02
54.0	3.29	3.22	0.07	20.78	55.73	54.0	1.15	1.14	1.04
56.0	3.28	3.23	0.04	23.31	56.33	56.0	1.11	1.10	1.07
58.0	3.26	3.24	0.03	26.68	57.07	58.0	1.08	1.07	1.09
60.0	3.26	3.24	0.02	31.10	57.97	60.0	1.06	1.03	1.11
62.0	3.26	3.25	0.02	32.74	58.96	62.0	1.05	1.01	1.12
63.9	3.28	3.25	0.03	28.85	59.98	63.9	1.06	1.04	1.14
64.0	3.28	3.25	0.03	28.54	60.06	64.0	1.07	1.04	1.14
66.0	3.30	3.25	0.05	24.75	61.27	66.0	1.09	1.07	1.15
68.0	3.33	3.25	0.09	21.98	62.53	68.0	1.13	1.11	1.16
70.0	3.38	3.25	0.13	19.84	63.86	70.0	1.17	1.15	1.18
72.0	3.43	3.24	0.19	18.13	65.24	72.0	1.21	1.19	1.19
74.0	3.50	3.23	0.27	16.71	66.65	74.0	1.25	1.23	1.20
76.0	3.58	3.23	0.35	15.51	68.10	76.0	1.30	1.27	1.22
78.0	3.67	3.22	0.45	14.47	69.56	78.0	1.36	1.31	1.23
80.0	3.77	3.21	0.56	13.55	71.03	80.0	1.42	1.35	1.25
82.0	3.89	3.20	0.68	12.75	72.49	82.0	1.49	1.40	1.28
84.0	4.02	3.20	0.82	12.03	73.95	84.0	1.56	1.46	1.31
86.0	4.17	3.21	0.96	11.38	75.39	86.0	1.64	1.51	1.34
88.0	4.33	3.22	1.11	10.81	76.80	88.0	1.74	1.58	1.38
90.0	4.51	3.23	1.27	10.30	78.18	90.0	1.84	1.65	1.42

¹Total Loss = Insertion Loss + 3dB Splitter Loss

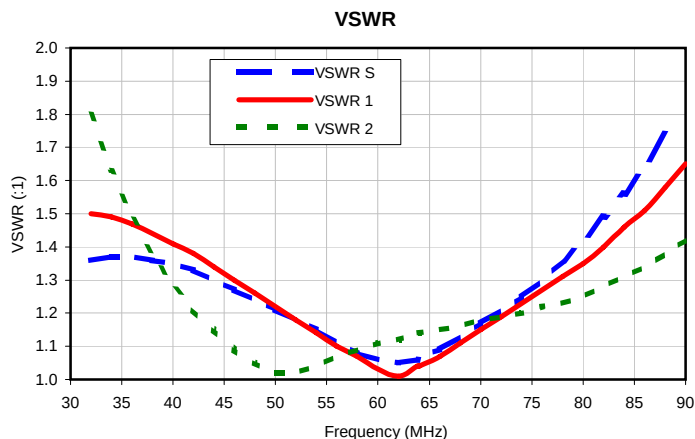
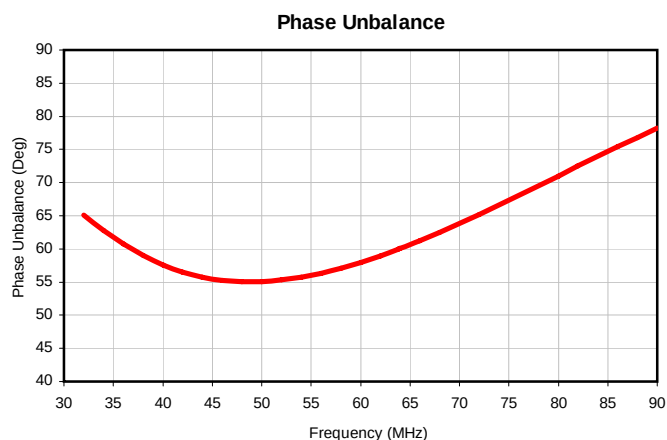
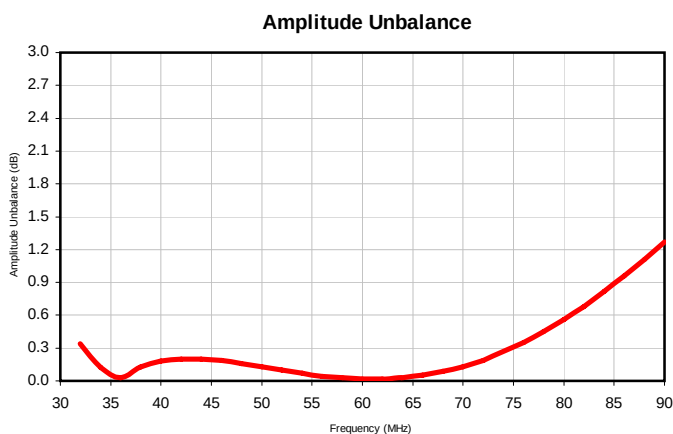
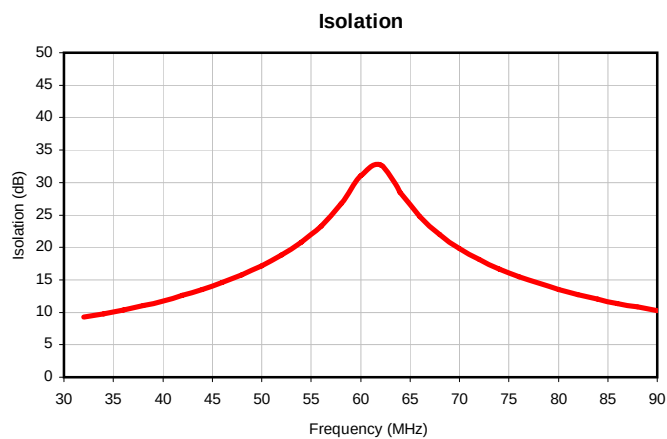
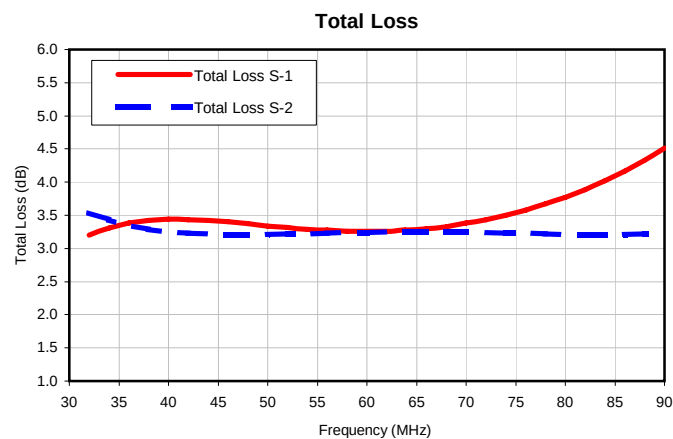


P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
 The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

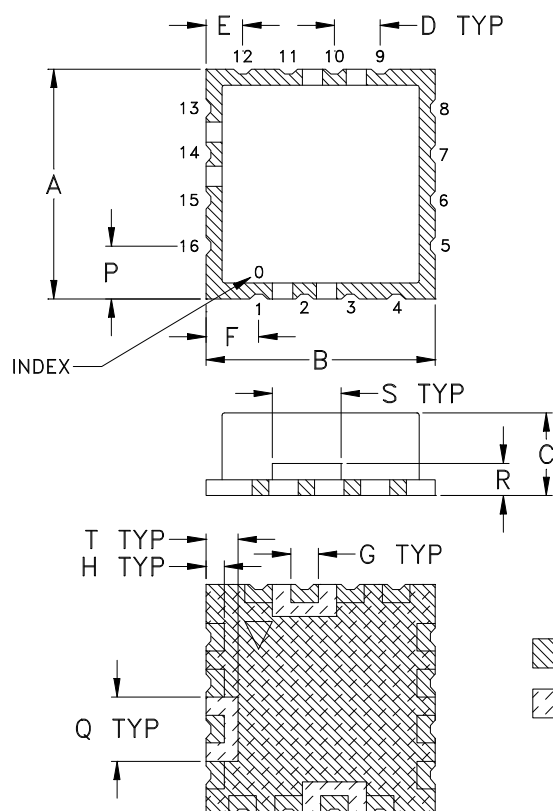
IF/RF MICROWAVE COMPONENTS

REV. X2
 RPSC-ED13768
 9/13/2010
 Page 1 of 1

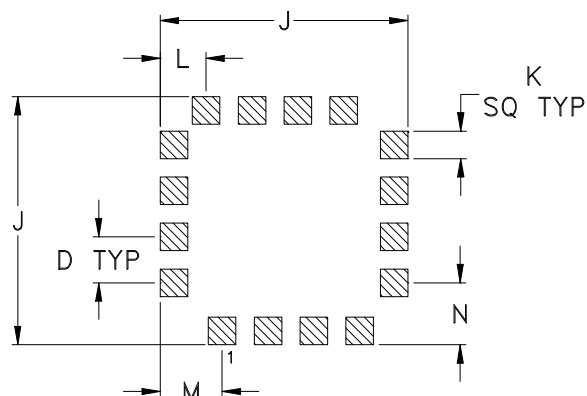
Typical Performance Curves



Outline Dimensions



PCB Land Pattern



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

CASE #	A	B	C	D	E	F	G	H	J	K
CK605-1	.500 (12.70)	.500 (12.70)	.180 (4.57)	.100 (2.54)	.080 (2.03)	.115 (2.92)	.060 (1.52)	.040 (1.02)	.540 (13.72)	.060 (1.52)

CASE #	L	M	N	P	Q	R	S	T	WT. GRAM
CK605-1	.100 (2.54)	.135 (3.43)	.135 (3.43)	.115 (2.92)	.140 (3.56)	.070 (1.78)	.150 (3.81)	.070 (1.78)	1.0

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: Tin copper solder alloy with up to 0.07% Nickel.



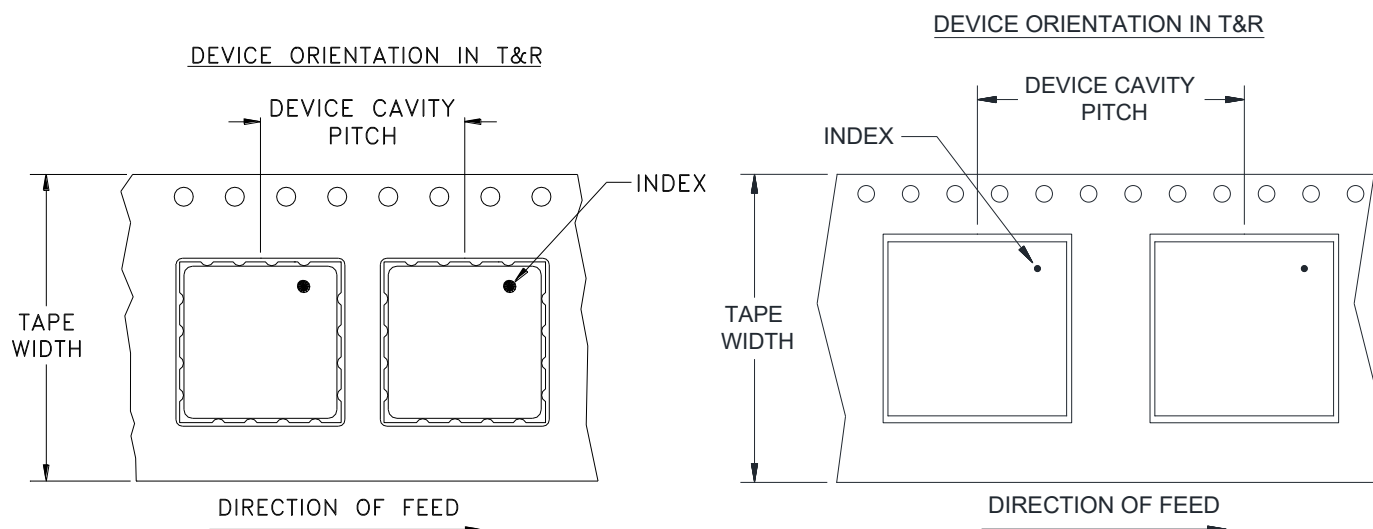
INTERNET <http://www.minicircuits.com>

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

Tape & Reel Packaging TR-F37



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
24	16	7	Small quantity standards (see note)	10
				20
				50
				100
		13	Standard	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



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
HAST	130°C, 85% RH, 96 hours	JESD22-A110
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 Eutectic Process: 225°C peak Pb-Free Process, 245°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Vibration (High Frequency)	20g peak, 20-2000 Hz, 4 times in each of three axes (total 12)	MIL-STD-883, Method 2007.3, Condition A
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