

Non-Catalog Model

Power Splitter/Combiner

2 Way-0°

TO5SC-2-1

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.

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CASE STYLE : PP163

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		1		500	MHz
Isolation	1 - 10 MHz	20	30		dB
	10 - 250 MHz	20	28		dB
	250 - 500 MHz	20	26		dB
Insertion Loss Above 3.0 dB	1 - 10 MHz		0.20	0.50	dB
	10 - 250 MHz		0.30	0.70	dB
	250 - 500 MHz		0.70	1.50	dB
Phase Unbalance	1 - 10 MHz		0.230	2.000	deg.
	10 - 250 MHz		0.070	1.000	deg.
	250 - 500 MHz		0.113	2.500	deg.
Amplitude Unbalance	1 - 10 MHz		0.074	0.250	dB
	10 - 250 MHz		0.082	0.250	dB
	250 - 500 MHz		0.086	0.400	dB
VSWR	SUM Port		1.03		(:1)
	OUT Ports		1.06		(:1)

Notes: Matched power rating: 1 Watt.

Internal load dissipation: 0.125 Watt.

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

PIN CONNECTIONS	
SUM PORT	2
PORT 1	1
PORT 2	3
GND EXT	4, 5
CASE GND	4, 5

Functional Diagram



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
1.0	3.14	3.25	0.11	31.07	0.71	1.0	1.04	1.11	1.15
2.0	3.13	3.20	0.08	34.63	0.47	2.0	1.03	1.08	1.10
3.0	3.12	3.19	0.07	36.60	0.31	3.0	1.02	1.07	1.09
4.0	3.13	3.19	0.06	37.74	0.27	4.0	1.02	1.06	1.08
5.0	3.12	3.19	0.07	38.36	0.14	5.0	1.02	1.06	1.07
6.0	3.13	3.19	0.07	38.57	0.15	6.0	1.02	1.05	1.07
7.0	3.14	3.20	0.06	38.73	0.09	7.0	1.01	1.05	1.07
8.0	3.12	3.19	0.07	38.70	0.11	8.0	1.01	1.05	1.07
9.0	3.13	3.20	0.07	38.61	0.03	9.0	1.01	1.05	1.07
10.0	3.13	3.21	0.08	38.52	0.02	10.0	1.01	1.05	1.07
15.0	3.14	3.20	0.06	37.73	0.01	15.0	1.02	1.05	1.07
20.0	3.15	3.22	0.07	37.02	0.02	20.0	1.02	1.05	1.07
25.0	3.16	3.24	0.08	36.31	0.07	25.0	1.02	1.05	1.07
30.0	3.16	3.24	0.08	35.66	0.03	30.0	1.02	1.05	1.07
35.0	3.17	3.24	0.08	35.12	0.03	35.0	1.02	1.05	1.07
40.0	3.17	3.26	0.09	34.68	0.08	40.0	1.02	1.05	1.07
45.0	3.17	3.26	0.08	34.25	0.08	45.0	1.03	1.05	1.07
50.0	3.18	3.27	0.09	33.81	0.09	50.0	1.03	1.05	1.07
55.0	3.18	3.27	0.09	33.51	0.04	55.0	1.03	1.05	1.06
60.0	3.20	3.29	0.08	33.17	0.01	60.0	1.03	1.05	1.06
65.0	3.21	3.29	0.08	32.85	0.06	65.0	1.03	1.05	1.06
70.0	3.20	3.29	0.09	32.52	0.09	70.0	1.03	1.05	1.06
75.0	3.21	3.30	0.09	32.19	0.11	75.0	1.03	1.05	1.06
80.0	3.22	3.30	0.08	31.92	0.06	80.0	1.04	1.04	1.06
85.0	3.21	3.30	0.09	31.64	0.14	85.0	1.04	1.04	1.06
90.0	3.22	3.31	0.08	31.40	0.10	90.0	1.04	1.04	1.06
95.0	3.23	3.30	0.08	31.12	0.06	95.0	1.04	1.04	1.06
100.0	3.23	3.31	0.08	30.89	0.09	100.0	1.04	1.04	1.06
125.0	3.24	3.32	0.08	29.78	0.11	125.0	1.05	1.04	1.06
150.0	3.26	3.35	0.08	28.90	0.06	150.0	1.05	1.04	1.05
175.0	3.27	3.35	0.09	28.07	0.05	175.0	1.05	1.03	1.05
200.0	3.30	3.39	0.08	27.45	0.13	200.0	1.06	1.03	1.05
225.0	3.29	3.36	0.07	26.86	0.13	225.0	1.06	1.03	1.05
250.0	3.33	3.42	0.09	26.47	0.09	250.0	1.06	1.03	1.05
275.0	3.32	3.42	0.10	26.08	0.06	275.0	1.06	1.03	1.05
300.0	3.37	3.45	0.08	25.82	0.05	300.0	1.05	1.03	1.06
325.0	3.34	3.43	0.09	25.68	0.20	325.0	1.05	1.04	1.07
350.0	3.42	3.51	0.09	25.70	0.19	350.0	1.04	1.05	1.08
400.0	3.43	3.51	0.08	25.91	0.12	400.0	1.03	1.07	1.11
450.0	3.54	3.63	0.09	26.87	0.03	450.0	1.05	1.10	1.15
500.0	3.64	3.71	0.07	28.41	0.16	500.0	1.10	1.13	1.19

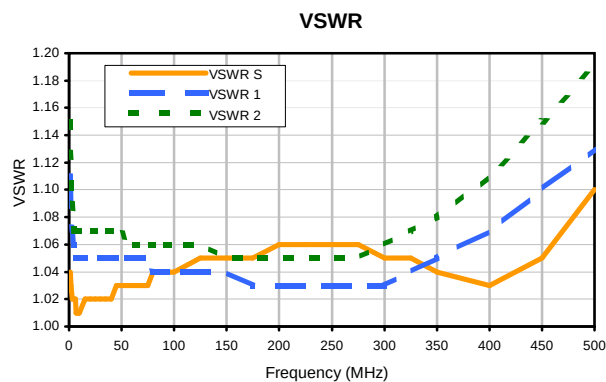
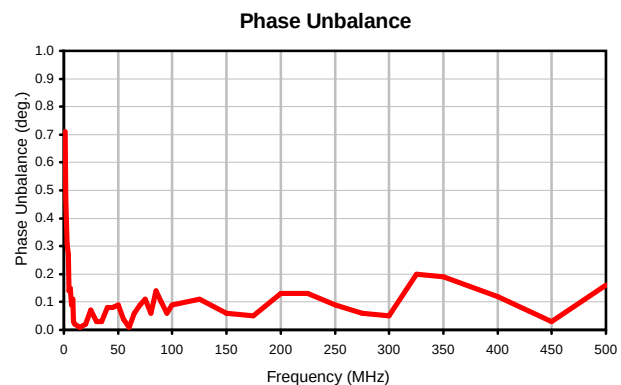
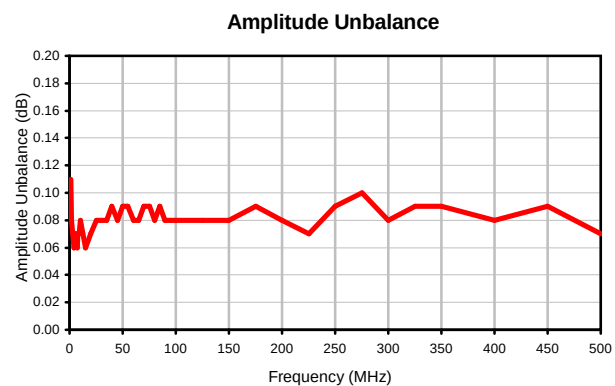
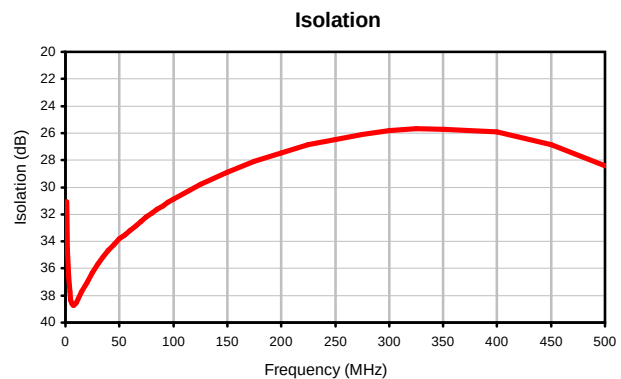
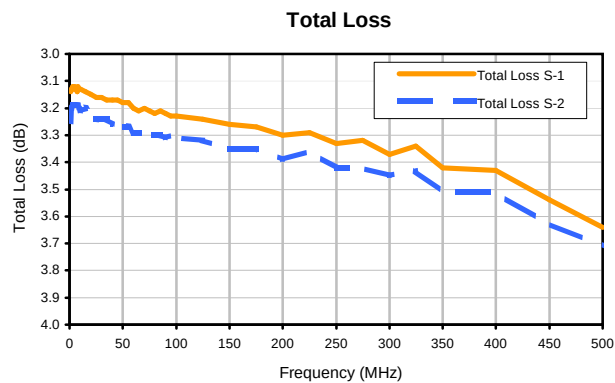
¹ Total Loss = Insertion Loss+ 3dB Splitter Loss

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Typical Performance Curves



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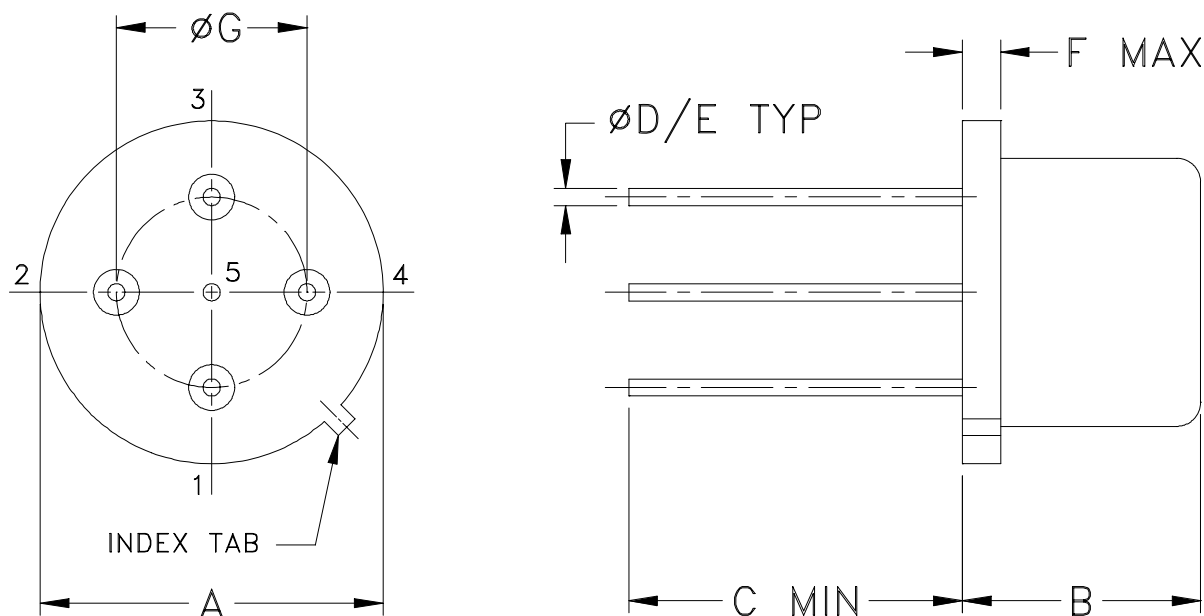
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	WT, GRAM
PP163	.360 (9.14)	.250 (6.35)	.35 (8.89)	.016 (.41)	.020 (.51)	.04 (1.02)	.200 (5.08)	2.9

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

Notes:

- Header material: C.R.S. or kovar.
Pin material: # 52 alloy or kovar.
Cover material: Nickel.
- Pin finish: Gold plate 25 μ inches (.64 microns) min.
- For pin designations see specifications data sheet.
- Pin numbers do not appear on unit, for reference only.