

Engineering Development Model

Power Splitter/Combiner

TPQ-ED8115

2 Way-90°

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.

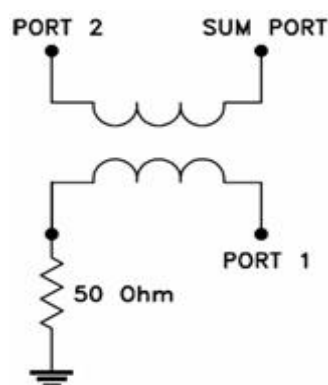
CASE STYLE : NNN150

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		900		1200 MHz
Isolation	900 - 1200 MHz		19	
Insertion Loss				
Average of Coupled Outputs	900 - 1200 MHz		0.25	
above 3.0 dB				
Phase Unbalance	900 - 1200 MHz		0.093	
Amplitude Unbalance	900 - 1200 MHz		0.391	
VSWR	SUM Port		1.07	
	OUT Ports		1.20	

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

PIN CONNECTIONS	
SUM PORT	
PORT 1	
PORT 2	
GND EXT	
CASE GND	
NOT USED	

Functional Diagram



2 Way-90° Power Splitter/Combiner

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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹			AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR		
	S-1	S-2	AVG.					S	1	2
900.0	2.59	3.88	3.24	1.29	19.04	90.40	900.0	1.12	1.24	1.13
920.0	2.79	3.76	3.28	0.97	18.98	90.19	920.0	1.12	1.24	1.14
940.0	2.87	3.69	3.28	0.82	18.98	89.65	940.0	1.11	1.23	1.14
960.0	2.88	3.63	3.26	0.75	18.96	89.48	960.0	1.10	1.23	1.15
980.0	2.95	3.57	3.26	0.63	19.01	89.91	980.0	1.10	1.23	1.15
1000.0	2.99	3.45	3.22	0.45	18.96	90.43	1000.0	1.09	1.23	1.16
1010.0	3.06	3.38	3.22	0.32	18.91	90.57	1010.0	1.09	1.23	1.16
1020.0	3.15	3.34	3.25	0.19	18.89	90.34	1020.0	1.08	1.23	1.16
1030.0	3.18	3.30	3.24	0.12	18.88	90.07	1030.0	1.08	1.23	1.17
1035.0	3.19	3.28	3.24	0.09	18.88	89.94	1035.0	1.08	1.22	1.17
1040.0	3.22	3.27	3.25	0.06	18.89	89.89	1040.0	1.08	1.22	1.17
1045.0	3.23	3.26	3.25	0.04	18.91	89.83	1045.0	1.07	1.22	1.17
1050.0	3.25	3.27	3.26	0.02	18.94	89.80	1050.0	1.07	1.22	1.17
1055.0	3.27	3.26	3.27	0.01	18.95	89.73	1055.0	1.07	1.22	1.17
1060.0	3.27	3.26	3.27	0.02	18.96	89.70	1060.0	1.07	1.22	1.17
1065.0	3.28	3.25	3.27	0.03	18.97	89.77	1065.0	1.07	1.22	1.17
1070.0	3.29	3.23	3.26	0.05	18.97	89.86	1070.0	1.07	1.22	1.18
1075.0	3.29	3.21	3.25	0.08	18.96	89.99	1075.0	1.07	1.22	1.18
1080.0	3.30	3.20	3.25	0.11	18.96	90.15	1080.0	1.06	1.22	1.18
1085.0	3.31	3.17	3.24	0.15	18.94	90.24	1085.0	1.06	1.22	1.18
1090.0	3.33	3.14	3.24	0.19	18.94	90.30	1090.0	1.06	1.22	1.18
1100.0	3.36	3.07	3.22	0.29	18.90	90.49	1100.0	1.06	1.22	1.18
1110.0	3.43	3.04	3.24	0.39	18.88	90.53	1110.0	1.05	1.21	1.19
1120.0	3.48	3.00	3.24	0.48	18.84	90.30	1120.0	1.05	1.21	1.19
1130.0	3.52	2.98	3.25	0.54	18.84	90.09	1130.0	1.05	1.21	1.19
1140.0	3.53	2.94	3.24	0.58	18.84	90.07	1140.0	1.04	1.21	1.20
1150.0	3.55	2.92	3.24	0.63	18.86	90.14	1150.0	1.04	1.21	1.20
1160.0	3.59	2.90	3.25	0.69	18.88	90.20	1160.0	1.04	1.21	1.20
1180.0	3.66	2.86	3.26	0.80	18.92	90.33	1180.0	1.03	1.21	1.21
1200.0	3.75	2.82	3.29	0.93	19.00	90.41	1200.0	1.02	1.20	1.22

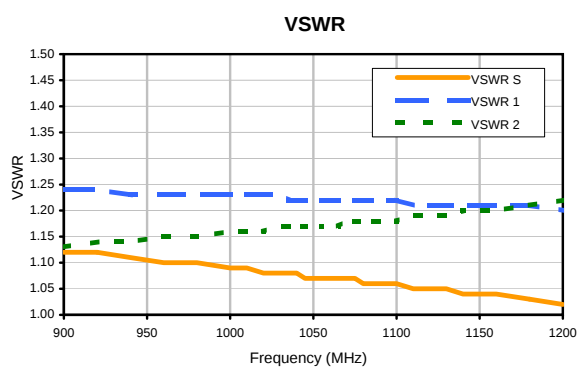
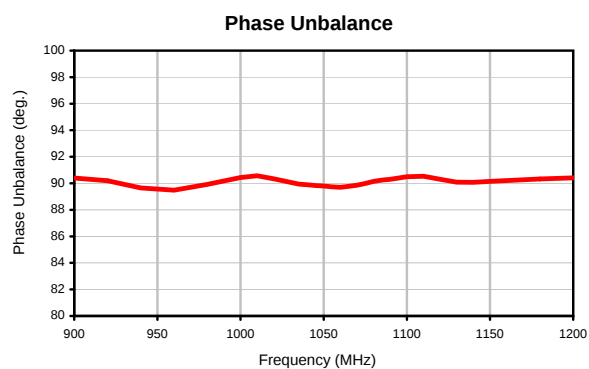
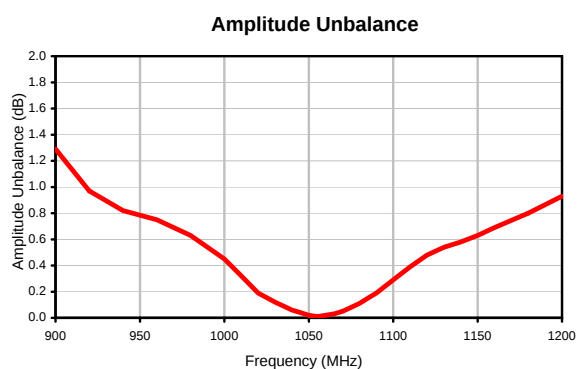
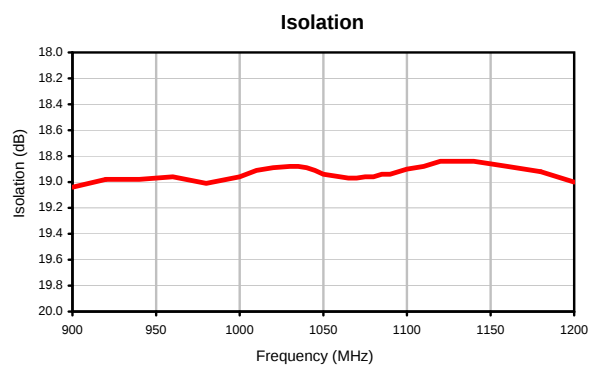
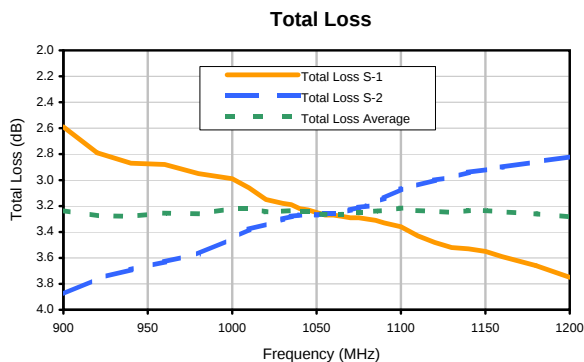
¹Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
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100706
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2 Way-90° Power Splitter/Combiner

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Typical Performance Curves



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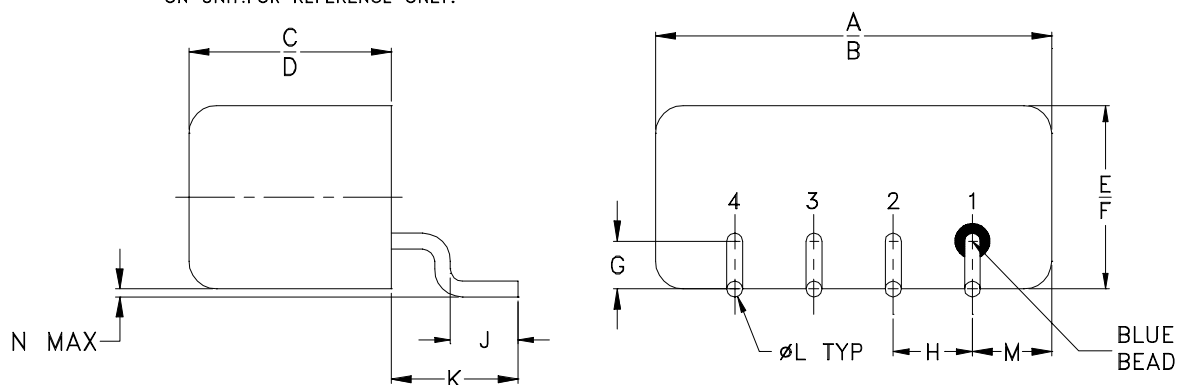
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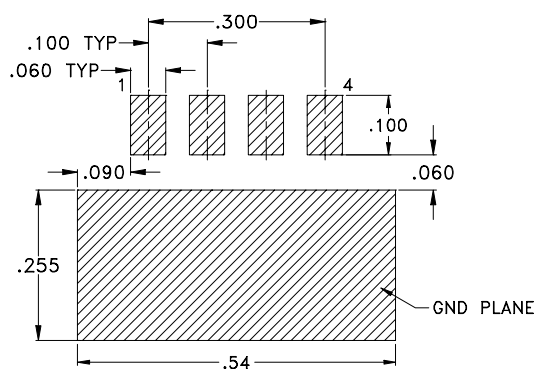
Outline Dimensions

NNN150

NOTE: BLUE BEAD INDICATES PIN #1.
PIN NUMBERS DO NOT APPEAR
ON UNIT.FOR REFERENCE ONLY.



PCB Land Pattern



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

CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N	WT, GRAM
NNN150	.50 (12.70)	.48 (12.19)	.255 (6.48)	.240 (6.10)	.23 (5.84)	.21 (5.33)	.06 (1.52)	.100 (2.54)	.09 (2.29)	.16 (4.06)	.020 (0.51)	.09 (2.29)	.005 (0.13)	1.9

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

Notes:

- Header material C.R.S. Pin material #52 alloy.
- Finish: Electro-Tin, hot-oil flowed or electro-Tin-Silver.
- Cover material: Cupro-Nickel.
- Pin's meniscus 0.015 inch max.
- Special Tolerances: Pin diameter $\pm .005$ inch.



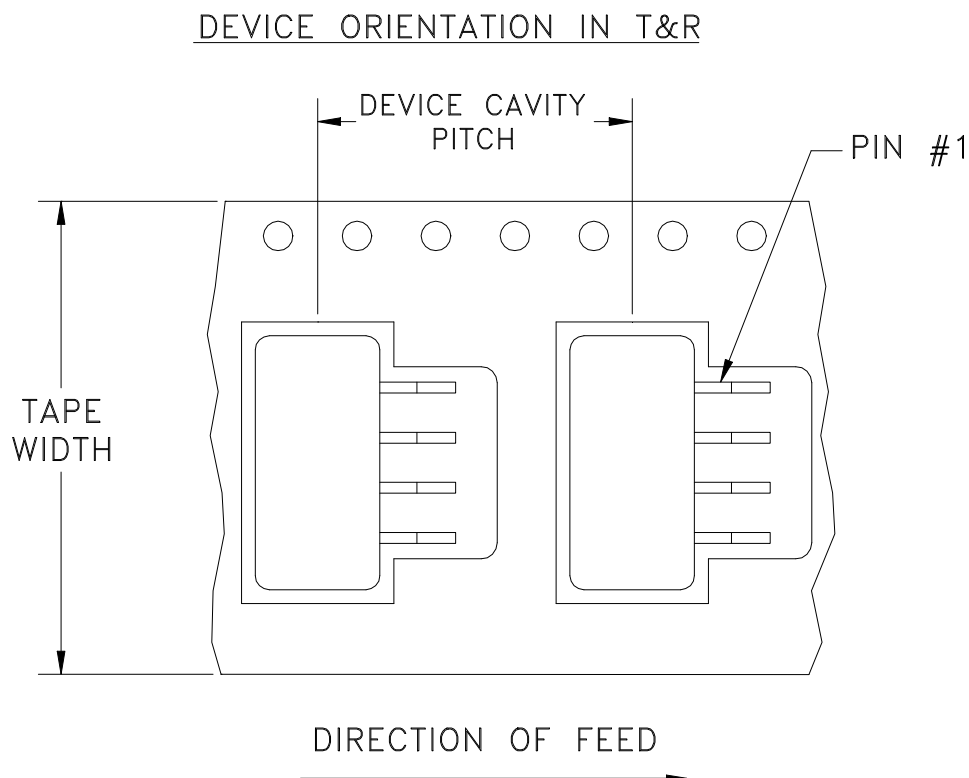
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