Surface Mount Directional Coupler 75Ω 16.5 dB 5 to 1250 MHz

Features

- wideband, 5 to 1250 MHz
- low mainline loss, 1.5 dB typ.
- aqueous washable
- · leads for excellent solderability
- protected by US Patent 6,140,887

Applications

- DOCSIS[®] 3.1 Systems VHF/UHF
- CATV
- cellular

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Тур.	Max.	Unit
Frequency Range		5		1250	MHz
Mainline Loss ¹ (above theoretical 0.1 dB)	5 - 50 50 - 1000 1000 - 1250		1.5 1.4 1.5	2.0 1.8 1.9	dB
Nominal Coupling	5 - 1250	—	16.5±0.5	—	dB
Coupling Flatness(±)	5 - 1250	_	0.3	0.6	dB
Directivity	5 - 50 50 - 1000 1000 - 1250	15 18 15	20 22 23	-	dB
Return Loss (Input)	5 - 50 50 - 1000 1000 - 1250	13 17 17	15 25 20		dB
Return Loss (Output)	5 - 50 50 - 1000 1000 - 1250	14 18 17	16 23 20		dB
Return Loss (Coupling)	5 - 50 50 - 1000 1000 - 1250	10 14 17	12 17 20		dB
Input Power	5 - 100 100 - 1250			0.5 1.0	W

1. Mainline loss includes theoretical power loss at coupled port.

Maximum Ratings

Parameter	Ratings		
Operating Temperature	-40°C to 85°C*		
Storage Temperature	-55°C to 100°C		

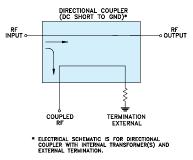
Permanent damage may occur if any of these limits are exceeded.

* Case temperature is defined as temperature on ground leads.

Pin Connections

Function	Pin Number		
INPUT	3		
OUTPUT	4		
COUPLED	1		
GROUND	2		
75Ω TERM EXTERNAL	6		
NOT USED	5		

Electrical Schematic



REV. OR M151380 TCD-16-122-75X+ WP/CP/AM 160616 Page 1 of 2

TCD-16-122-75X+



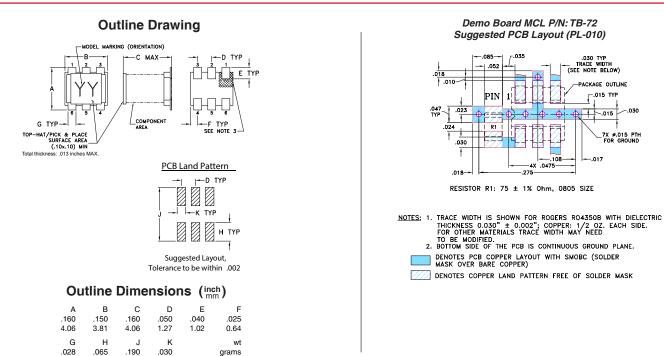
CASE STYLE: DB1627

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

	Available Tape and Reel at no extra cost
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

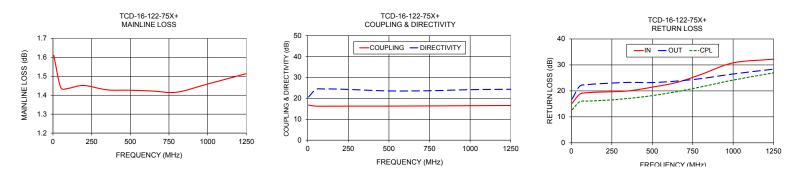
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Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)	Coupling (dB)	Directivity (dB)	Return Loss (dB)		
()	In-Out	ln-Cpl		In	Òuť	Cpl
5	1.61	16.76	20.64	15.28	16.94	12.7
50	1.44	16.26	24.21	18.65	21.72	15.7
100	1.44	16.24	24.47	19.33	22.41	16.0
200	1.45	16.26	24.38	19.58	22.85	16.3
350	1.43	16.28	23.92	19.98	23.26	17.0
500	1.43	16.28	23.52	21.44	23.20	18.1
650	1.42	16.34	23.54	23.23	23.78	19.6
800	1.42	16.38	23.69	26.28	24.72	21.5
1000	1.46	16.48	24.14	30.79	26.51	24.1
1250	1.51	16.56	24.31	32.20	28.37	26.9



Additional Notes

0 71

1.65

4 83

0 76

0.15

A. 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.

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

