

Surface Mount Directional Coupler

75Ω 5 to 1250 MHz

TCD-13-122-75X+

Features

- wideband, 5 to 1250 MHz
- low mainline loss, 1.2 dB typ.
- aqueous washable
- leads for excellent solderability
- protected by US Patent 6,140,887

Applications

- DOCSIS® Systems
- VHF/UHF
- CATV
- cellular



Generic photo used for illustration purposes only

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

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1250	MHz
Mainline Loss ¹ (above theoretical 0.1 dB)	5 - 500	—	0.9	1.3	dB
	500 - 1000	—	1.0	1.4	
	1000 - 1250	—	1.2	1.6	
Nominal Coupling	5 - 1250	—	12.7±0.5	—	dB
Coupling Flatness(±)	5 - 1250	—	0.5	0.9	dB
Directivity	5 - 500	17	20	—	dB
	500 - 1000	11	15	—	
	1000 - 1250	8	11	—	
Return Loss (Input)	5 - 500	17	19	—	dB
	500 - 1000	18	22	—	
	1000 - 1250	17	20	—	
Return Loss (Output)	5 - 500	19	22	—	dB
	500 - 1000	20	24	—	
	1000 - 1250	18	20	—	
Return Loss (Coupling)	5 - 500	17	20	—	dB
	500 - 1000	18	23	—	
	1000 - 1250	17	20	—	
Input Power	50-200	—	—	0.5	W
	200 - 1250	—	—	1.0	

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

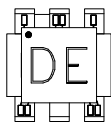
Permanent damage may occur if any of these limits are exceeded.

* Case temperature is defined as temperature on ground leads.

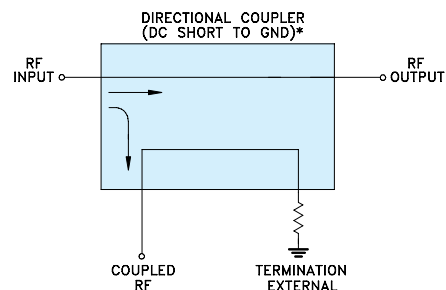
Pin Connections

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

Product Marking



Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) AND EXTERNAL TERMINATION.



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