

# Surface Mount Directional Coupler

75Ω 16.5dB 5 to 1218 MHz

## TCD-16-12W-75X+

### Features

- wideband, 5 to 1218 MHz
- low mainline loss, 0.7 dB typ.
- aqueous washable
- leads for excellent solderability
- protected by US Patent 6,140,887

### Applications

- DOCSIS® 3.1 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		1218	MHz
Mainline Loss (above theoretical 0.1 dB)	5 - 50	—	0.65	0.9	dB
	50 - 870	—	0.5	0.8	
	870 - 1218	—	0.70	1.0	
Nominal Coupling	5 - 1218	—	16.0±0.5	—	dB
Coupling Flatness(±)	5 - 1218	—	0.8	1.2	dB
Directivity	5 - 50	25	35	—	dB
	50 - 870	11	16	—	
	870 - 1218	8	12	—	
Return Loss (Input)	5 - 50	18	22	—	dB
	50 - 870	14	18	—	
	870 - 1218	16	19	—	
Return Loss (Output)	5 - 50	20	25	—	dB
	50 - 870	17	19	—	
	870 - 1218	18	22	—	
Return Loss (Coupling)	5 - 50	18	22	—	dB
	50 - 870	15	17	—	
	870 - 1218	14	16	—	
Input Power	5 - 1218	—	—	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

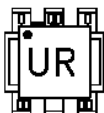
Permanent damage may occur if any of these limits are exceeded.

\* Case temperature is defined as temperature on ground leads.

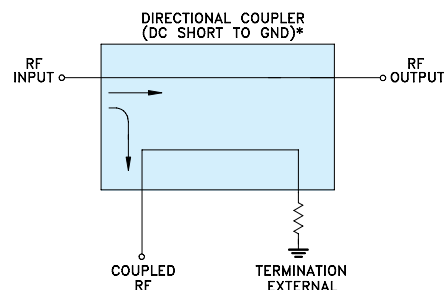
### Pin Connections

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

### Product Marking



### Electrical Schematic



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



