

Surface-Mount, Micro-Miniature

Directional Couplers

50&75Ω 5 to 2000 MHz

DBTC-SERIES

NEW!



AT790



Features

- very flat coupling
- very broadband, multi octave
- temperature stable, BLUE CELL™ base
- all welded construction
- micro-miniature coupler, 0.15" x 0.15" x 0.15"
- protected by patent 6,140,887
- additional patent pending

Applications

- instrumentation
- cable TV
- communication receivers and transmitters

Electrical Specifications

MODEL NO.	FREQ. RANGE (MHz)	COUPLING (dB)	MAINLINE LOSS (dB)			DIRECTIVITY (dB)			VSWR ¹ (:1)	POWER INPUT, W		CASE STYLE	CONNECTOR	PRICE \$
			Max. Nom.	Flatness		L Typ. Max.	M Typ. Max.	U Typ. Max.		L Max.	MU Max.			
DBTC-9-4	5-1000	9.0±0.5	±0.5			1.2 2.0	1.2 1.8	1.5 2.0	21 17	18 13	15 —	1.30	0.5 1.0	1.99
DBTC-10-4-75	5-1000	10.5±0.5	±0.7			1.5 2.2	1.4 2.0	1.5 2.0	21 16	20 13	16 —	1.30	0.5 1.0	1.99
DBTC-12-4	5-1000	12.2±0.5	±0.9			0.9 1.8	0.7 1.3	1.1 1.6	33 22	21 14	15 —	1.30	0.5 1.0	1.99
DBTC-13-4	5-1000	13.0±0.5	±0.6			0.7 1.3	0.7 1.3	1.1 1.6	21 17	18 13	13 —	1.30	0.5 1.0	1.99
DBTC-13-5-75	5-1000	13.2±0.5	±0.6			0.9 1.4	1.0 1.5	1.1 1.6	21 17	19 14	18 —	1.30	0.5 1.0	1.99
	1000-1500	13.6±0.5	±0.8				1.4 2.2			17 —				
DBTC-16-5-75	5-1000	16.3±0.5	±0.7			1.2 2.0	1.0 1.5	1.1 1.6	22 16	21 13	20 —	1.30	1.0 1.0	1.99
	1000-1500	16.5±0.5	±0.7				1.3 1.9			19 —				
DBTC-17-5	50-1000	17.0±0.7	±0.9				0.9 1.4			20 13		1.30	— 2.0	1.99
	1000-1500	17.7±0.9	±1.0				1.0 1.5			20 10		1.30	— 2.0	
	1500-2000	18.0±1.0	±0.8				1.1 1.6			14 —		1.30	— 2.0	
DBTC-18-4-75	5-1000	18.2±0.5	±0.7			0.8 1.5	0.8 1.4	1.0 1.6	25 16	21 14	15 —	1.30	1.0 1.0	1.99
DBTC-20-4	20-1000	20.4±0.6	±0.8			0.3 1.0	0.4 1.0	0.7 1.3	21 13	21 14	16 —	1.20	1.0 1.0	1.99

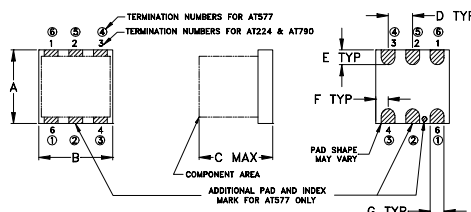
1. For coupled port VSWR above 500 MHz, 1.6:1 typ.

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 150°C

Outline Drawing



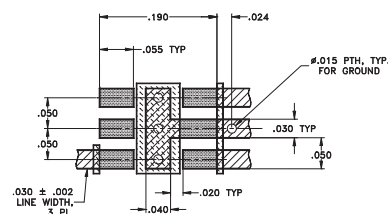
Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.150	.150	.150	.050	.030	.025	.028
3.81	3.81	3.81	1.27	0.76	0.64	0.71

H	J	K	wt.
.050	.160	.030	grams
1.27	4.06	0.76	.15

Suggested PCB Layouts

PL-020 for 50 OHMS
PL-018 for 75 OHMS (shown)



- DENOTES METALLIZATION
- DENOTES SOLDER MASK
- DENOTES METALLIZATION FOR DEVICE SOLDERING

RECOMMENDED MATERIAL: ROGERS RO4350, DIELECTRIC THICKNESS: .030 ± .002 COPPER: 1/2 OZ. EACH SIDE

Pin Configuration

PORT	(na)
INPUT	3
OUTPUT	4
COUPLED	1
GND	2
NOT USED*	5,6
DEMO BOARD	TB-102 (50 ohms)
	TB-103 (75 ohms)

* pins 5&6 must be isolated

designers kits available

KIT No.	No. of Units in KIT	Description	Price \$ per KIT
K1-DBTC	25	5 of each: DBTC-9-4, DBTC-12-4 DBTC-13-4, DBTC-17-5, DBTC-20-4	49.95
K2-DBTC	20	5 of each: DBTC-10-4-75, DBTC-13-5-75 DBTC-16-5-75, DBTC-18-4-75	39.95



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ISO 9001 CERTIFIED

REV. B
M77388
DBTC-9-4 ED-8958/1
DBTC-10-4-75 ED-8953/1
DBTC-12-4 ED-8954/1
DBTC-13-4 ED-8955/1
DBTC-13-5-75 ED-8967/1
DBTC-16-5-75 ED-8978/1
DBTC-17-5 ED-8785A/1
DBTC-18-4-75 ED-8956/1
DBTC-20-4 ED-8957/1
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WZ/RD/CP
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