

Directional Couplers

75Ω, 12dB Coupling, 5 to 1200 MHz

Maximum Ratings

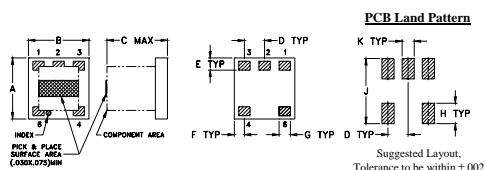
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

Pin Connections

INPUT	3
OUTPUT	4
COUPLED	1
GROUND	2
ISOLATE (DO NOT USE)	6

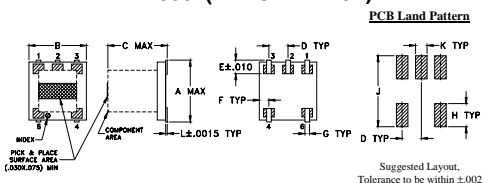
Outline Drawing / Dimensions (inch mm)

AT790-1 (DBTC-12-4-75)



	A	B	C	D	E	F	G	H	J	K	wt
	.150	.150	.150	.050	.030	.025	.028	.050	.160	.030	grams
	3.81	3.81	3.81	1.27	0.76	0.64	0.71	1.27	4.06	0.76	0.10

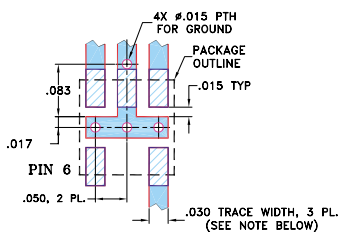
AT1030 (DBTC-12-4-75L)



	A	B	C	D	E	F	G	H	J	K	L	wt
	.166	.150	.155	.050	.037	.025	.012	.060	.184	.030	.004	grams
	4.22	3.81	3.94	1.27	0.94	0.64	0.30	1.52	4.67	0.76	0.10	0.10

Demo Board MCL P/N: TB-279

Suggested PCB Layout (PL-151)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- very flat coupling, ±0.2 dB typ.
- temperature stable, LTCC base
- all welded construction
- protected by US Patents, 6,140,887 & 6,784,521

Applications

- CATV
- wire-line broadband access



No Leads

CASE STYLE:AT790-1
PRICE: \$ 1.99 ea. QTY (25)
\$ 1.69 ea. QTY (1000)



Leads

CASE STYLE:AT1030
PRICE: \$ 2.14 ea. QTY (25)
\$ 1.84 ea. QTY (1000)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

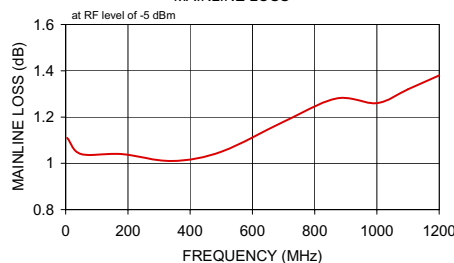
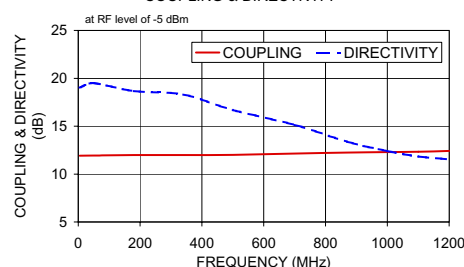
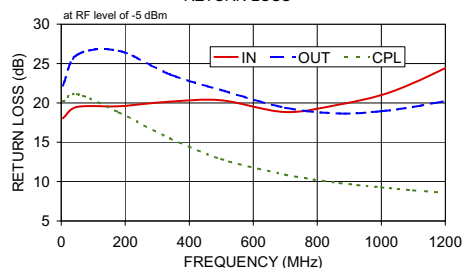
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.		
5-1200	12±0.5	±0.6						
5-50			1.1	1.8	19	17	1.3	0.5
50-500			1.1	1.4	18	15	1.3	1.0
500-1000			1.2	1.6	17	10	1.3	1.0
1000-1200			1.3	1.9	13	8	1.3	1.0

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)	Coupling (dB)	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl		In	Out	Cpl
5.00	1.11	11.92	19.03	18.05	22.21	20.18
50.00	1.04	11.93	19.50	19.49	26.11	21.12
180.00	1.04	11.98	18.67	19.58	26.61	18.80
340.00	1.01	11.99	18.30	20.15	23.62	15.48
500.00	1.05	12.00	16.68	20.32	21.63	12.88
700.00	1.18	12.15	15.13	18.84	19.39	10.88
870.00	1.28	12.24	13.39	19.80	18.65	9.82
1000.00	1.26	12.29	12.40	21.00	18.94	9.27
1100.00	1.32	12.34	11.84	22.53	19.49	8.90
1200.00	1.38	12.41	11.54	24.40	20.24	8.59

DBTC-12-4-75L+
MAINLINE LOSSDBTC-12-4-75L+
COUPLING & DIRECTIVITYDBTC-12-4-75L+
RETURN LOSS

electrical schematic

