

Directional Couplers

75Ω, 9dB Coupling, 5 to 1200 MHz

Maximum Ratings

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

Pin Connections

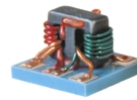
INPUT	3
OUTPUT	4
COUPLED	1
GROUND	2
ISOLATE (DO NOT USE)	6

Features

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

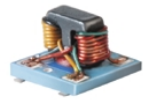
Applications

- CATV
- wire-line broadband access



No Leads

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



Leads

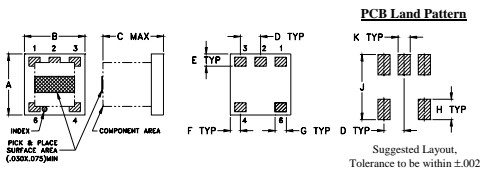
CASE STYLE: AT1030
PRICE: \$ 2.14 ea. QTY (25)
\$ 1.84 ea. QTY (1000)

+ 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.

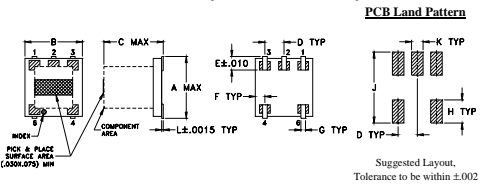
Outline Drawing / Dimensions (inch mm)

AT790-1 (DBTC-9-4-75)



	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

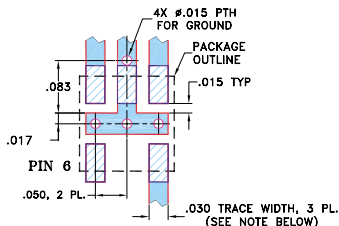
AT1030 (DBTC-9-4-75L)



	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.

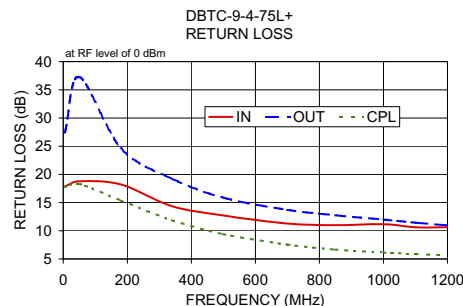
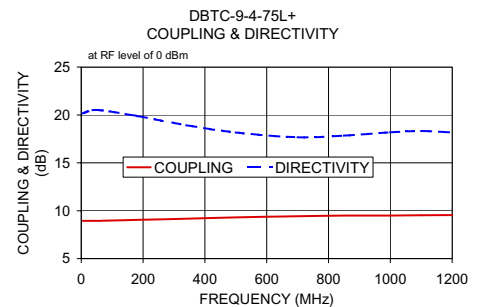
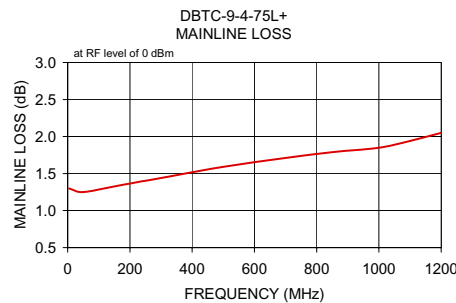
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications

FREQ. (MHz)	COUPLING (dB)		MAINLINE LOSS (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Max. Flatness	Typ.	Max.	Typ.	Min.		
5-1200	9.3±0.5	±0.7						
5-50			1.3	1.8	20	16	1.3	0.5
50-500			1.4	1.9	19	16	1.4	0.5
500-1000			1.5	2.1	18	15	1.6	0.5
1000-1200			1.8	2.4	17	12	1.8	0.5

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
5.00	1.30	8.95	20.16	17.86	27.44	17.79
50.00	1.25	8.94	20.52	18.77	37.27	18.31
180.00	1.35	9.04	19.88	18.21	24.64	15.38
340.00	1.47	9.17	18.93	14.37	19.25	11.87
500.00	1.59	9.31	18.17	12.71	15.89	9.41
700.00	1.71	9.43	17.66	11.29	13.70	7.55
850.00	1.79	9.50	17.84	10.98	12.74	6.68
1000.00	1.85	9.50	18.18	11.17	12.00	6.13
1100.00	1.94	9.53	18.33	10.61	11.44	5.87
1200.00	2.05	9.55	18.17	10.64	10.96	5.66



electrical schematic

