

Surface Mount ^{top hat} RF Transformer

75Ω 0.6 to 600 MHz

TC4-6T-75X+



Generic photo used for illustration purposes only

CASE STYLE: AT1521

+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

Features

- DOCSIS 3.1 suitable
- plastic base with leads
- aqueous washable

Applications

- impedance matching
- unbalance to balance transformation
- cable/CATV and broadband fiber networks

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			4		
Frequency Range		0.6	—	600	MHz
Insertion Loss*	0.6-600	—	—	1.8	dB
	1- 300	—	—	1.0	
Amplitude Unbalance	0.6-600	—	0.6	1.2	dB
	1- 300	—	0.1	0.5	
Phase Unbalance	0.6-600	—	3	8	Degree
	1- 300	—	0.2	2	
Return Loss	0.6-600	8	13	—	dB
	1- 300	12	20	—	

*Insertion Loss is referenced to mid-band loss, 0.7 dB typ.

Maximum Ratings

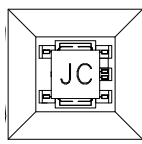
Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

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

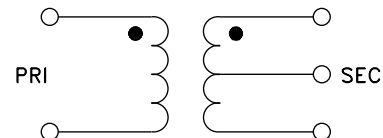
Pin Connections

Function	Pin Number
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2

Product Marking

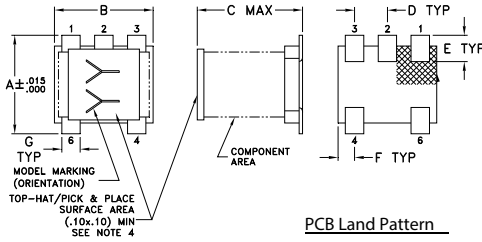


Config. A



TC4-6T-75X+

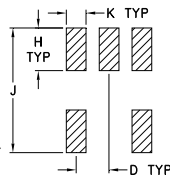
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.150	.150	.160	.050	.040	.025
3.81	3.81	4.06	1.27	1.02	0.64
G	H	J	K	wt	
.028	.065	.190	.030	grams	
0.71	1.65	4.83	0.76	0.15	

PCB Land Pattern



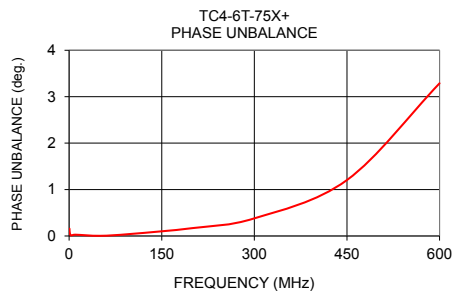
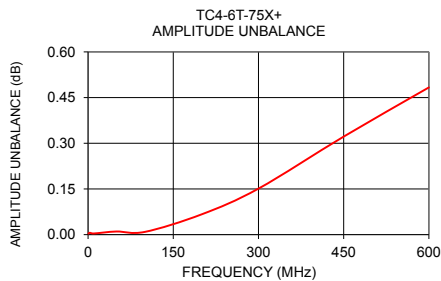
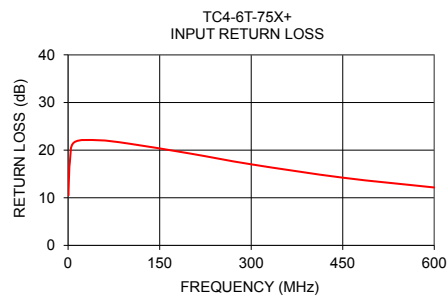
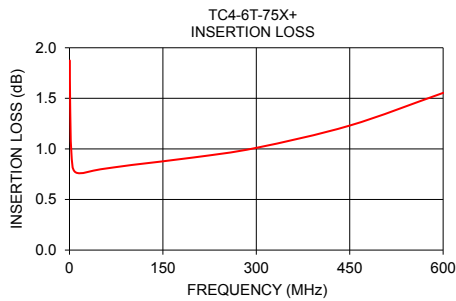
Note:

1. Case Material Plastic
2. Termination Finish: Tin plate over Nickel plate.
3. Lead #1 identifier shall be located in the cross-hatched area shown, on bottom view. Identifier may be either a molded or marked feature.
4. Top-Hat total thickness: .013 inches max.

Suggested Layout,
Tolerance to be within ±.002

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
0.60	1.87	10.51	0.00	0.16
1.00	1.49	12.84	0.00	0.07
3.00	0.97	17.73	0.01	0.01
10.00	0.77	21.64	0.00	0.03
50.00	0.80	22.07	0.01	0.00
100.00	0.84	21.36	0.01	0.04
200.00	0.92	19.28	0.07	0.17
300.00	1.01	17.02	0.15	0.38
450.00	1.23	14.22	0.32	1.21
600.00	1.55	12.16	0.48	3.29



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