

Surface Mount RF Transformer

50Ω 30 to 1000 MHz 10 Watt

SYTX4-13HP+



Generic photo used for illustration purposes only

CASE STYLE: AH1647

+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: 13" Devices/Reel: 200

Maximum Ratings

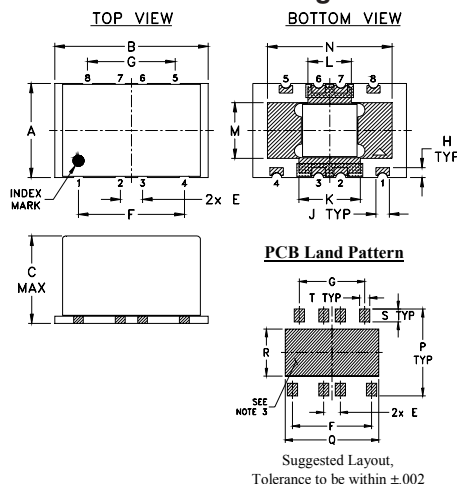
Operating Temperature	-40°C to 65°C
Storage Temperature	-55°C to 100°C
RF Power	10W
DC Current	30mA

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

Pin Connections

PRIMARY DOT	1
PRIMARY	4
SECONDARY DOT	8
SECONDARY	5
SECONDARY CT (GND)	6,7
GROUND	2,3

Outline Drawing



Features

- high power input, 10 Watt max.
- wide bandwidth, 30 to 1000 MHz
- good amplitude unbalance, 0.5 dB typ. at 1 dB bandwidth
- excellent phase unbalance 3 deg. typ. at 1 dB bandwidth
- balanced transmission line with secondary center tap

Applications

- PCS
- cellular

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			4		Ohm
Frequency Range		30	—	1000	MHz
Insertion Loss*	100-500	—	0.3	1.0	dB
	50-700	—	0.7	1.5	
	30-1000	—	1.0	2.5	
Amplitude Unbalance	100-500	—	0.5	1.5	dB
	50-700	—	0.9	2.5	
Phase Unbalance	100-500	—	3	9	Degree
	50-700	—	5	12	

* Insertion Loss is referenced to mid-band loss 0.6 dB typ.

1. The user must provide adequate means of heat removal to limit the temperature of ground connections under the PCB to 65°C, in order to ensure proper performance. At 25°C ambient temperature this requires thermal resistance of the user's PC board heat sink to be 10°C/W.

Typical Performance Data

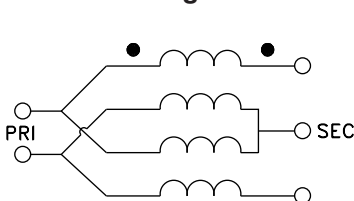
FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
30.00	0.89	19.69	0.64	0.51
50.00	0.94	22.20	0.61	0.92
100.00	0.83	27.30	0.58	1.65
200.00	0.71	30.65	0.49	2.78
500.00	0.73	21.68	0.10	2.93
600.00	0.81	21.24	0.01	0.65
700.00	0.90	20.68	0.03	2.25
800.00	1.05	18.61	0.28	6.29
900.00	1.26	15.64	0.78	10.33
1000.00	1.59	12.63	1.48	13.63

Refer to Application Note: [AN-00-017](#)

Outline Dimensions (inch/mm)

A	B	C	E	F	G	H	J	K
.433	.690	.415	.100	.476	.394	.045	.060	.276
11.00	17.53	10.54	2.54	12.09	10.01	1.14	1.52	7.01
L	M	N	P	Q	R	S	T	wt
.194	.257	.560	.475	.561	.258	.069	.061	grams
4.93	6.53	14.22	12.07	14.25	6.55	1.75	1.55	2.80

Config. H



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

