

Surface Mount

RF Transformer

SYTX2-52HP-20W+

50Ω 20 Watt 30 to 520 MHz

The Big Deal

- High power handling, 20W
- Low insertion loss, 0.8 dB typ.
- Small size, 0.43 x 0.69 x 0.42"



CASE STYLE: AH1647

Product Overview

Mini-Circuits' SYTX2-52HP-20W+ is a high-power, surface-mount transformer with a secondary/primary impedance ratio of 1:2, covering the 30 to 520 MHz band. With proper heat sinking, the transformer is capable of handling RF input power up to 20W. It provides low insertion loss (0.8 dB) as well as good matching VSWR1.25:1. Featuring core and wire construction mounted on a printed laminate base, the unit comes enclosed in a miniature, shielded package measuring just 0.43 x 0.69 x 0.42", ideal for dense circuit board layouts.

Key Features

Feature	Advantages
High RF power handling (20W)	Supports systems with high power requirements in small device size.
Low insertion loss, 0.8 dB	Provides excellent transmission of signal power from input to output.
Good Return Loss, 18 dB typ	Provide good in to output impedance matching.
Small footprint, 0.43 x 0.69 x 0.42"	Accommodates tight space requirements for dense PCB layouts.

Notes

- A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Surface Mount RF Transformer

SYTX2-52HP-20W+

25/50Ω 30 to 520 MHz 20 Watt

Maximum Ratings

Operating Temperature	-40°C to 65°C case*
Storage Temperature	-55°C to 100°C
RF Power	20W

*Case temperature is defined as temperature on ground leads.
*Permanent damage may occur if any of these limits are exceeded.

Pin Connections

PRIMARY (50 ohm)	4
SECONDARY (25 ohm)	1
GROUND	5
NOT USE	8
CASE GROUND	all others

Features

- high power input, 20 Watt max.
- low insertion loss, 0.8 dB typ.
- small size, 0.43 x 0.69 x 0.42

Applications

- military mobile
- PCS
- BALUN
- diode matching



CASE STYLE: AH1647

+RoHS Compliant

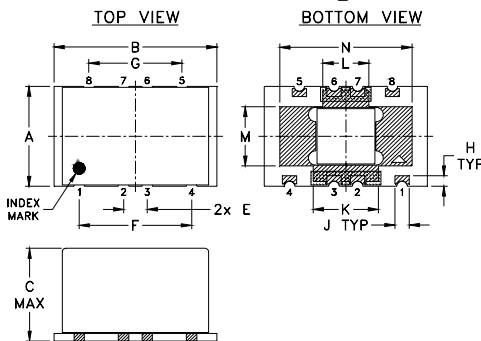
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications at 25°C

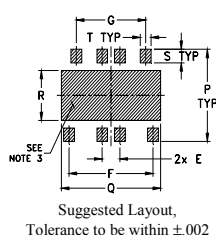
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			2		
Frequency Range		30	—	520	MHz
Insertion Loss	30-520	—	0.8	1.5	dB
Return Loss at 50 ohm	30-520	13	20	—	dB
Power Handling at primary ¹	30-520	—	—	20	Watt

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 2°C/W.

Outline Drawing



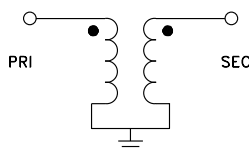
PCB Land Pattern



Outline Dimensions (inch)

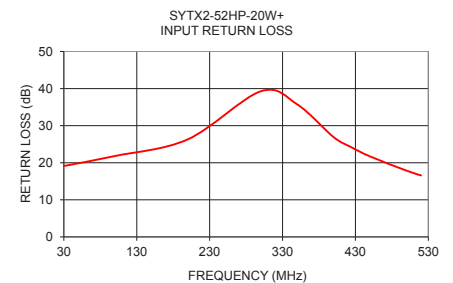
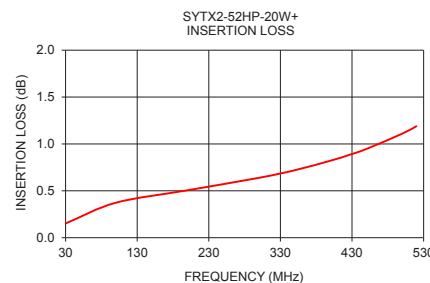
A	B	C	E	F	G	H	J	K
.433	.690	.415	.100	.476	.394	.045	.060	.276
11.00	17.53	10.54	2.54	12.09	10.01	1.14	1.52	7.01
L	M	N	P	Q	R	S	T	wt
.194	.257	.560	.475	.561	.258	.069	.061	grams
4.93	6.53	14.22	12.07	14.25	6.55	1.75	1.55	2.80

Config. D



Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	PRIMARY R. LOSS (dB)
30	0.15	19.13
100	0.37	21.81
200	0.51	26.31
300	0.64	39.26
350	0.72	35.76
400	0.82	26.92
425	0.88	24.12
450	0.95	21.71
500	1.11	17.88
520	1.19	16.58



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