

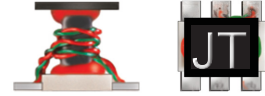
Surface Mount **RF Transformer**



**TCM2-452X-2+**

50Ω

20 to 4000 MHz



CASE STYLE: DB1627

**Maximum Ratings**

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.4W
DC Current	60mA

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

**Pin Connections**

PRIMARY DOT	3
PRIMARY	2
SECONDARY DOT	4
SECONDARY	6
GND (RF)	2,5
NOT USED	1

Note: Using schematic below, apply DC at pin 5 to distribute to pin 4 and 6

**Features**

- wide bandwidth 20 to 4000 MHz
- balanced transmission line
- good return loss
- aqueous washable

**Applications**

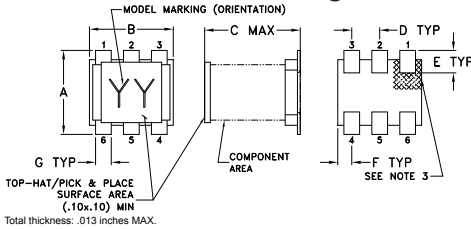
- PCS
- wideband push-pull amplifiers
- cellular

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

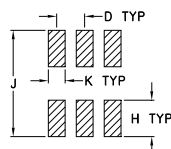
**Available Tape and Reel at no extra cost**

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

**Outline Drawing**



**PCB Land Pattern**

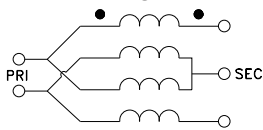


**Suggested Layout**

**Outline Dimensions (inch)**

A	B	C	D	E	F
.160	.150	.160	.050	.040	.025
4.06	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

**Config. H**



**Electrical Specifications at 25°C**

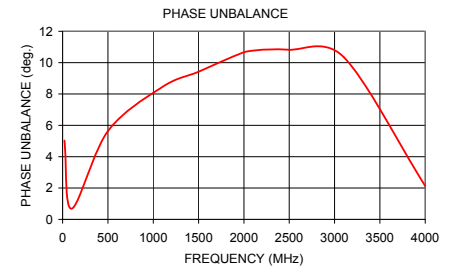
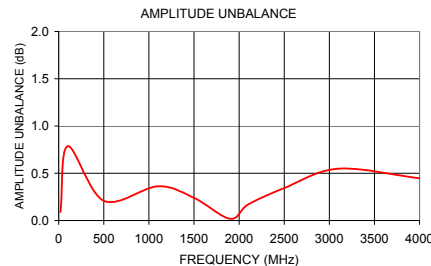
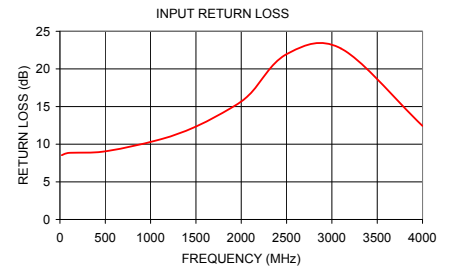
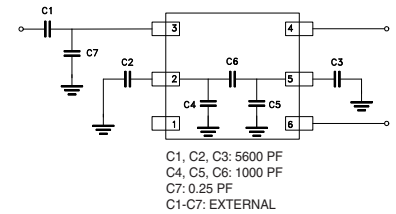
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		
Frequency Range		20	—	4000	MHz
Insertion Loss	20 - 4000	—	1.5	2.5	dB
Amplitude Unbalance	20 - 4000	—	0.5	—	dB
Phase Unbalance	20 - 4000	—	10	—	Degree

**Typical Performance Data**

FREQ. (MHz)	INS. LOSS (dB)	INPUT R. LOSS (dB)	AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)
20.0	1.75	8.54	0.09	5.03
100.0	1.85	8.85	0.79	0.68
500.0	1.63	9.05	0.21	5.63
1100.0	1.50	10.61	0.36	8.44
1500.0	1.42	12.35	0.24	9.42
1900.0	1.36	14.90	0.02	10.43
2100.0	1.34	16.71	0.17	10.77
2500.0	1.32	21.96	0.34	10.82
3100.0	1.34	22.72	0.55	10.36
4000.0	1.57	12.43	0.45	2.13

\* Note: 0.25 PF capacitor is suggested to be added at primary to ground to improve return loss.

**Electrical Schematic**



**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.
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