Surface Mount — Gull-Wing Lead; ON-CATALOG RF Transformer T1-1-KK

T1-1-KK81

CASE STYLE: KK81

0.15 to 400 MHz

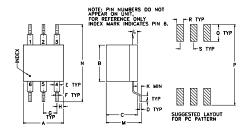
Maximum Ratings

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	250mW
DC Current	30mA
Permanent damage may occur if any	of these limits are exceeds

Pin Connections

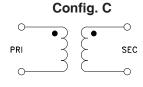
4
6
3
1
_
2,5

Outline Drawing



Outline Dimensions (inch)

J .05 1.27	.05	.100	.020	.042	.010	.23	.27	A .30 7.62
wt grams 0.50	.100	.050	.125	.600	.575	.26	.036	.020



Features

- wideband, 0.15 to 400 MHz
- · good return loss
- also available with plug-in (X65) & radial (W38) leads

Applications

- VHF/UHF
- receivers/transmitters

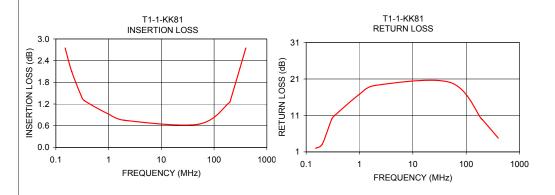
Transformer Electrical Specifications

Ω RATIO	FREQUENCY (MHz)		INSERTION LOSS*	
		3 dB MHz	2 dB MHz	1 dB MHz
1	0.15-400	0.15-400	0.35-200	2-50

^{*} Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

Typical Performance Data

, ·		
CY INSERTION LOSS (dB)		
2.75	1.98	
2.10	3.10	
1.44	9.92	
1.29	11.10	
0.92	16.82	
0.75	19.24	
0.64	20.06	
1.23	10.15	
1.26	9.90	
2.75	4.79	
	2.75 2.10 1.44 1.29 0.92 0.75 0.64 1.23 1.26	INSERTION INPUT LOSS (dB) (



- 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 ins.

 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively: "Standard Terms"): Purchases of this part. 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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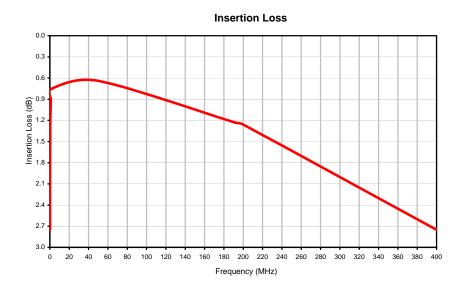
RF Transformer T1-1

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.15	2.75	1.98
0.20	2.10	3.10
0.30	1.44	9.92
0.35	1.29	11.10
1.00	0.92	16.82
2.00	0.75	19.24
50.00	0.64	20.06
191.32	1.23	10.15
200.00	1.26	9.90
400.00	2.75	4.79

RF Transformer T1-1

Typical Performance Curves

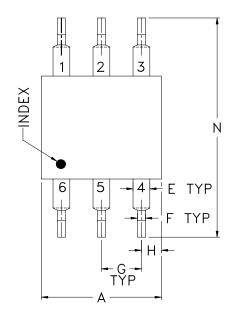




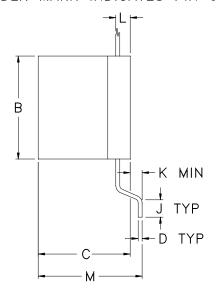


KK81 KK265

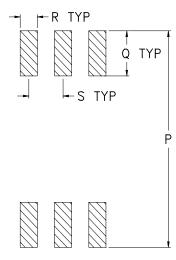
Outline Dimensions



NOTE: PIN NUMBERS DO NOT APPEAR ON UNIT, FOR REFERENCE ONLY INDEX MARK INDICATES PIN 6.



PCB Land Pattern



Suggested Layout, Tolerance to be within $\pm .002$

CASE#	A	В	C	D	Е	F	G	Н	J	K	L	M	N	P
KK81	.30	.27	.23	.010	0.42	.020	.100	.05	.05	.020	.036	.26	.575	.600
	(7.62)	(6.86)	(5.84)	(0.25)	(1.07)	(0.51)	(2.54)	(1.27)	(1.27)	(0.51)	(0.91)	(6.60)	(14.61)	(15.24)
KK265	.30	.27	.22	.010	.020	.020	.100	.05	.05	0.1	.032	.23	.450	.475
	(7.62)	(6.86)	(5.84)	(0.25)	(0.50)	(0.51)	(2.54)	(1.27)	(1.27)	(0.25)	(0.81)	(5.84)	(10.62)	(12.07)

CASE#	Q	R	S	WT. GRAM
KK81	.125 (3.18)	.050 (1.27)	.100 (2.54)	.50
KK265	.125 (3.18)	.050 (1.27)	.100 (2.54)	.65

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015

Notes:

1. Case material: Plastic.

2. Termination finish:

For RoHS Case Styles: Tin plate over Nickel plate.

For RoHS-5 Case Styles: Tin-Lead plate.

3. Special Tolerances: Termination width \pm .005 inch, termination thickness \pm .003 inch.



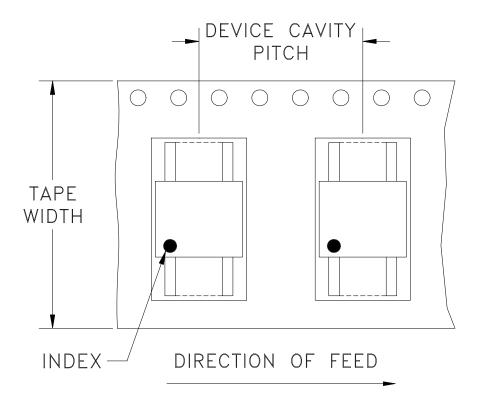
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DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
24	12	13	900

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Environmental Specifications

ENV19

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-20° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Lead Integrity	2 Pound Pull, perpendicular to edge of unit	MIL-STD-202, Method 211, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215

ENV19 Rev: A

03/09/11

M131005 File: ENV19.pdf

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