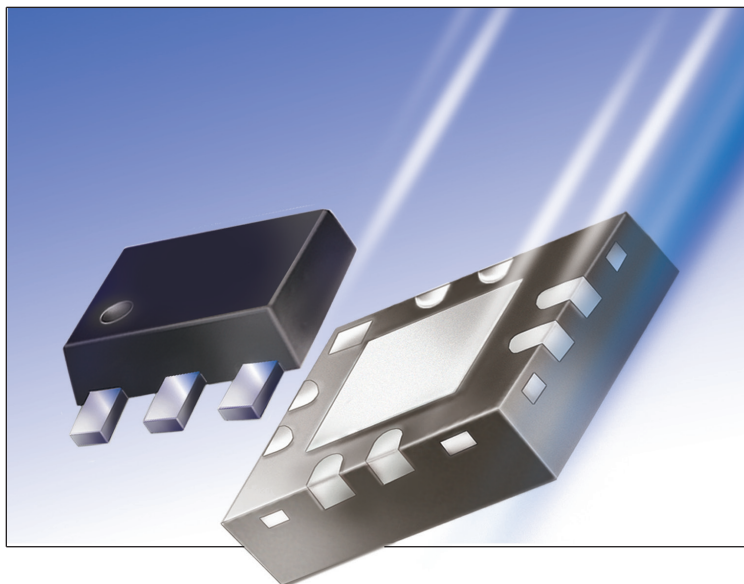


MINI-CIRCUITS DESIGNER'S KITS
SPEED UP
THE SOLUTION!



50 MHz to 18 GHz with just 2 models!

Features: PHA-1+

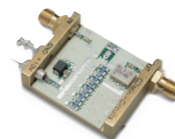
- 0.05-6 GHz
- Gain 13.5 ± 4 dB
- Ultra High IP3, 42 dBm
- P1dB, 22.2 dB typ.
- SOT-89 package

AVA-183A+

- 5-18 GHz
- Very Flat Gain, 13.6 ± 1 dB
- High Reverse Isolation, 31-42 dB
- P1dB, 19 dB
- 3 x 3 mm package

No External Matching Components Required

- Low Power Consumption
- Low Thermal Resistance
- 5V DC Power Supply



Evaluation boards available.
See individual model data sheets.

RoHS compliant

Kit K1-AVA+ Electrical specifications of each model (2 models, 10 of each, 20 total)

Model	Freq. GHz	Gain (dB Typical) at frequency, GHz							Max. Pwr. (dBm)		Dynamic Range ¹		Return Loss (Typ.)		DC Operating Power		Therm. Resist.
		(PHA-1+ frequency range)							Output ¹ (1 dB Comp.)		NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	Current (mA)	Voltage (V)	θ_{jc} Typ. (°C/W)
		f_L - f_U	0.5	0.8	2	3	4	6	Typ.	Min.							
PHA-1+	0.5-6		17.2	15.7	13.5	11.8	10.7	9.7	22.4	20.0	2.2	42.0	11	15	146	5.0	60
AVA-183A+	5-18		12.9	14.7	14.0	13.4	13.1	13.6	19.0	16.0	4.5	27.7	14	13	131	5.0	61

All data at 25°C, with 5V DC power supply, unless noted.

1. Model PHA-1+ at 2 GHz, model AVA-183-A+ at 10 GHz.

Mini-Circuits®
ISO 9001 ISO 14001 AS9100

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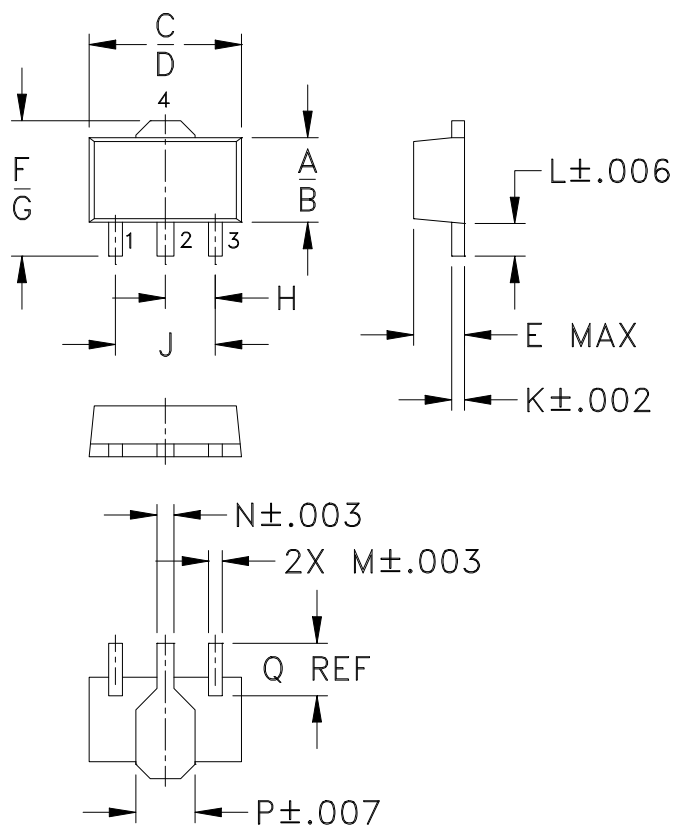
12
U.S. Patents
7739260, 7761442

The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

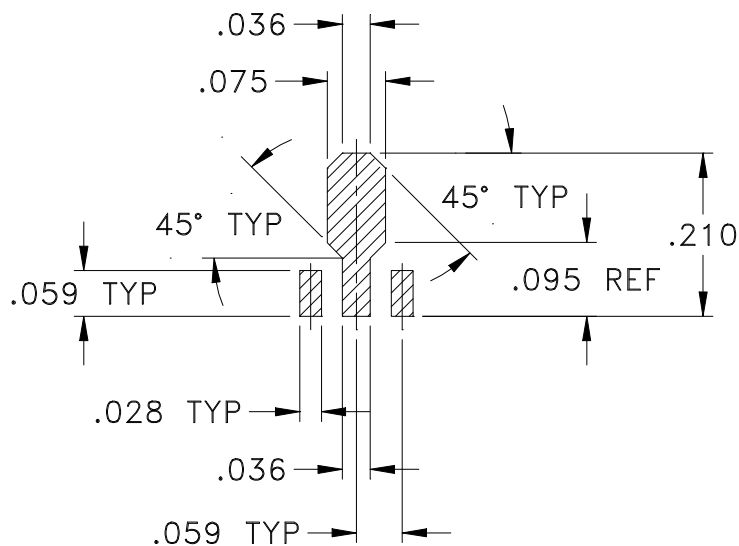
IF/RF MICROWAVE COMPONENTS

REV. OR
M135256
K1-AVA+

Outline Dimensions



PCB Land Pattern



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

CASE #	A	B	C	D	E	F	G	H	J	K	L	M
DF782	.102 (2.59)	.090 (2.29)	.181 (4.60)	.173 (4.39)	.063 (1.60)	.167 (4.24)	.155 (3.94)	.059 (1.50)	.118 (3.00)	.015 (0.38)	.041 (1.04)	.016 (0.41)

CASE #	N	P	Q	WT. GRAM
DF782	.019 (0.48)	.065 (1.65)	.062 (1.57)	.2

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3Pl. $\pm .005$

Notes:

- Case material: Plastic.
- Termination finish:
For RoHS Case Styles: Tin-Silver alloy plate over Nickel barrier or Matte-Tin.
All models, (+) suffix. See model Data sheet.
For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.



INTERNET <http://www.minicircuits.com>

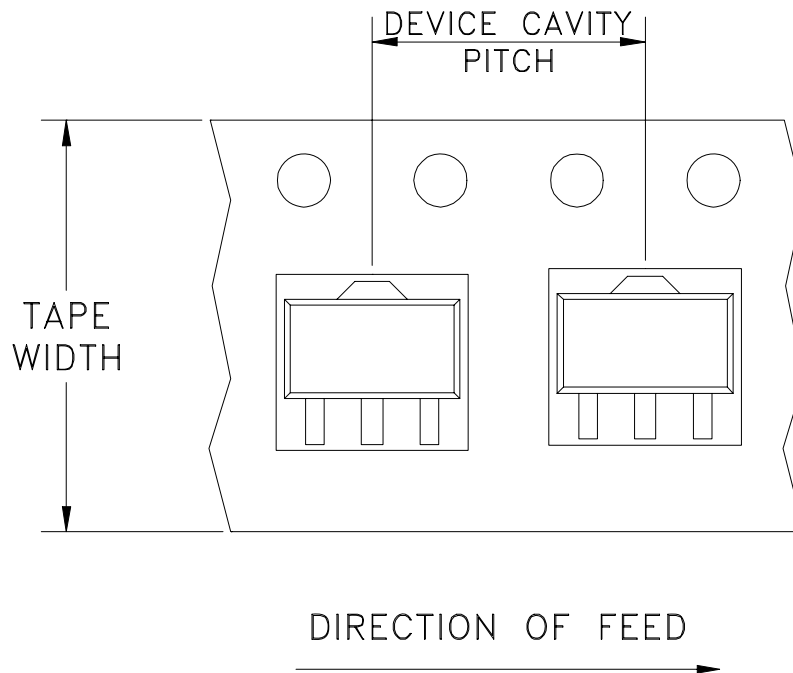
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Mini-Circuits ISO 9001 & ISO 14001 Certified

Tape & Reel Packaging TR-F55

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
12	8	7	Small quantity standard (see note)	20
				50
				100
				200
				500
			Standard	1000

Note: Please consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



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