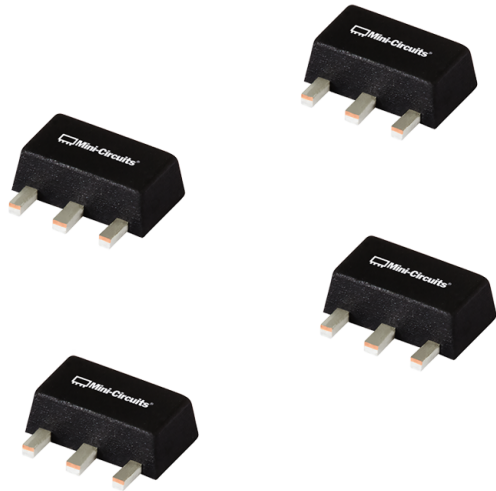




DESIGNER'S KIT K1-GVA+

Monolithic Amplifiers

50Ω DC to 7 GHz



FEATURES

- Fixed 5V operation
- Up to 21 dBm output power
- Choice of gain, from 10 dB to 24 dB typ. @ 100 MHz
- Transient and ESD protected
- Miniature SOT-89 package
- Ruggedized design
- Low thermal resistance

 MINI-CIRCUITS DESIGNER'S KITS
SPEED UP
 THE SOLUTION

 Evaluation boards available.
 See individual model data sheets


K1-GVA+ ELECTRICAL SPECIFICATIONS

(kit includes 4 models, 10 of each, 40 total)

Model	Freq. ¹ (GHz)	Gain (dB) Typical								Maximum Power (dBm) @ 2 GHz			Dynamic Range @ 2 GHz		VSWR (:1) Typ.		Max. Rating ²		DC ³ Operating Power @ pin 3				Therm. Resist.	Evaluation Board
		Over frequency, GHz								Output (1dB Compr.)		Input ²	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	I (mA)	P (mW)	Current (mA)	Device Volt.			θjc Typ. °C/W	
		f _L	f _U	0.1	1	2	3	4	6	7	Min@ 2 GHz									Typ.	Min	Typ.		
GVA-81+	DC-7	10.5	10.5	10.0	9.3	8.7	8.1	7.6	9.0	19.7	17.5	20	7.4	36.6	1.3	1.4	160	1000	103	5.0	4.8	5.2	65	TB-410-81+
GVA-82+	DC-7	15.3	14.9	13.8	12.5	11.7	10.6	9.9	12.4	20.6	18.0	20	6.6	36.0	1.3	1.7	160	840	106	5.0	4.8	5.2	68	TB-410-82+
GVA-83+	DC-7	20.5	19.3	17.1	15.2	13.8	12.3	11.2	15.4	18.6	17.3	20	6.2	31.5	1.3	1.7	120	740	72	5.0	4.8	5.2	88	TB-410-83+
GVA-84+	DC-6	24.1	21.7	18.4	16.0	14.6	12.5	-	17.4	20.6	19.6	13	5.5	36.6	1.3	2.6	160	1000	108	5.0	4.8	5.2	64	TB-410-84+

Protected under U.S. Patent 6,943,629

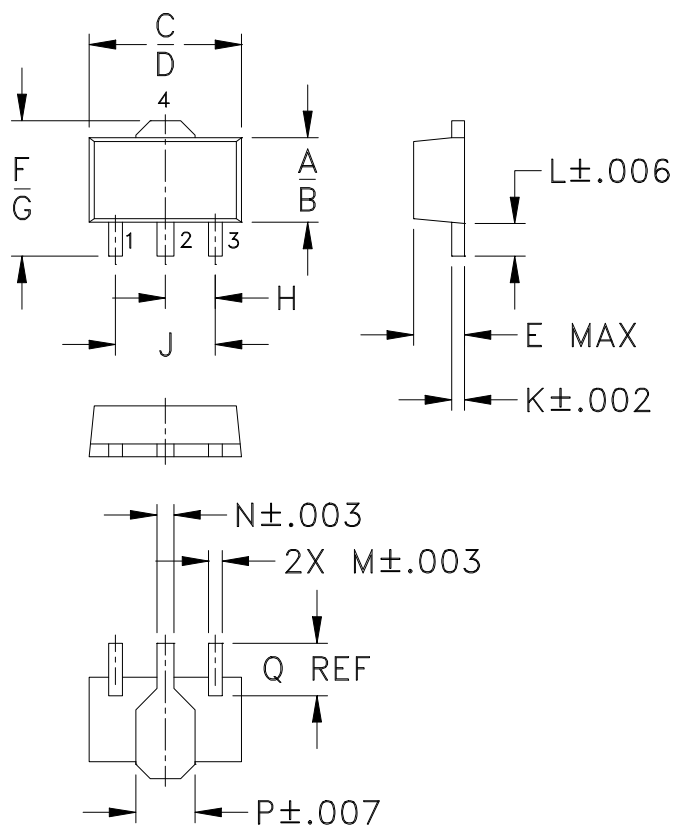
1. Low frequency cutoff determined by external coupling capacitors and RF choke (RFC). f_u is the upper frequency limit for each model.

2. Permanent damage may occur if any of these limits are exceeded. These ratings are not intended for continuous normal operation.

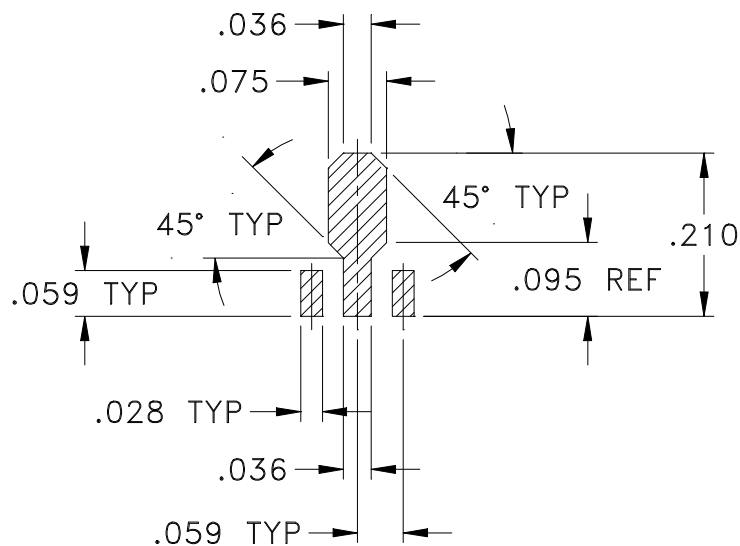
3. Supply voltage must be connected to pin 3 directly through RF choke, GVA-83+ requires a 7.5 ohm bias resistor.



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>

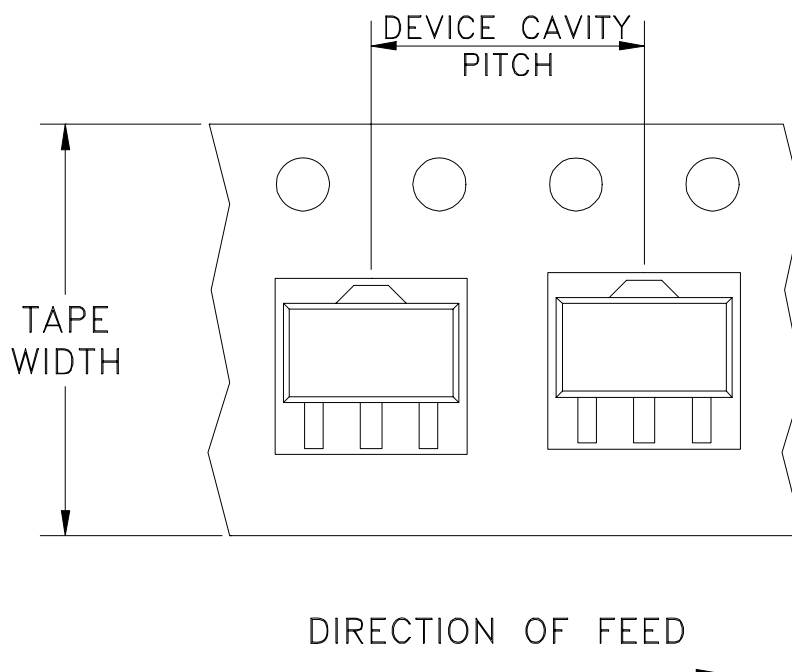
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

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



INTERNET <http://www.minicircuits.com>
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified