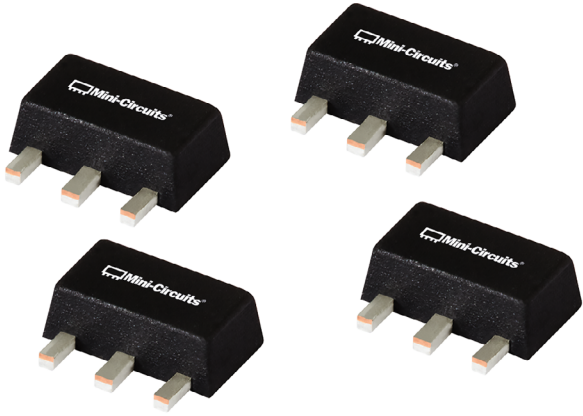




Wideband Amplifiers

50Ω DC to 8 GHz



FEATURES

- Wideband, 50 Ω
- InGaP HBT microwave
- Up to 21.5 dBm output power
- Noise figure from 2.7dB
- Transient and ESD protected
- Miniature SOT-89 package
- Exposed metal bottom
- Excellent heat dissipation
- Low thermal resistance
- Fixed voltage operation, GVA-84+



Evaluation boards available.
See individual model data sheets



K3-GALI_GVA+ ELECTRICAL SPECIFICATIONS

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

Model	Freq. ¹ (GHz)	Gain (dB) Typical							Maximum Power ² (dBm) @ 1 GHz		Dynamic Range @ 1 GHz		VSWR (:1) Typ.		Max. Rating ³		DC ⁴ Operating Power @ pin 3			Therm. Resist. θ _{jc} Typ. °C/W	Evaluation Board		
		Over frequency, GHz							Output	Input ³	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	I	P	Current	Device Volt.					
		f _l -f _u	0.1	1	2	3	4	6	Min @ 2 GHz	Typ.	Min	Typ.	Typ.	Typ.	mA	mW	(mA)	Typ.	Min.			Max	
**GVA-84+	DC-6	24.1	21.7	18.4	16.0	14.6	12.5	17.4	20.5	19.5	13	5.6	35.8	1.3	2.6	160	1000	108	5.0	4.8	5.2	64	TB-410-84+
GALI 74+	DC-1	25.1	21.8	18.0	15.3	13.4	-	20.0	18.3	18.0	10	2.7	38.0	1.2	1.6	130	700	80	4.8	4.3	5.3	120	TB-409-74+
GALI 24+	DC-6	25.3	22.6	19.1	16.6	14.9	12.4	18.1	19.2	18.2	13	4.3	35.0	1.4	2.0	160	1000	80	5.8	5.4	6.2	64	TB-409-24+
GALI 84+	DC-6	25.6	22.7	19.2	16.7	15.0	11.8	18.2	21.5	20.4	13	4.4	37.8	1.4	2.1	160	1000	100	5.8	5.4	6.2	64	TB-409-84+

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

** Operated with +5 V supply voltage.

1. Low frequency cutoff determined by external coupling capacitors. f_u is the upper frequency limit for each model.

2. Models tested at 1GHz, Gali 74+ IP3 at 0.1 GHz.

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

4. Supply voltage must be connected to pin 3 through a bias resistor in order to prevent damage, except GVA-84+. Reliability predictions are applicable at specified current and normal operating conditions.



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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