

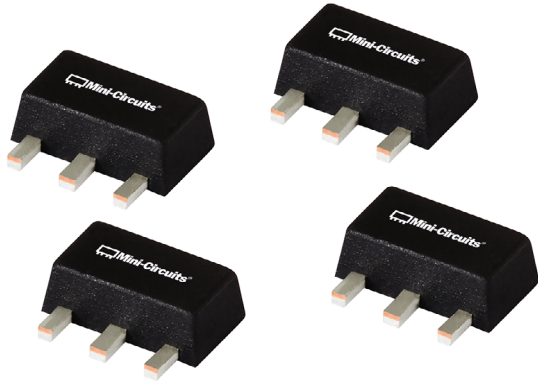


DESIGNER'S KIT K4-GALI+

Wideband Amplifiers

Mini-Circuits

50 Ω DC to 8 GHz



FEATURES

- Wideband, 50 Ω
- InGaP HBT microwave
- Up to 18.2 dBm output power
- Usable to 10 GHz
- Transient and ESD protected
- Miniature SOT-89 package
- Exposed metal bottom
- Excellent heat dissipation
- Low thermal resistance

MINI-CIRCUITS DESIGNER'S KITS
SPEED UP
THE SOLUTION



Evaluation boards available.
See individual model data sheets



K4-GALI+ ELECTRICAL SPECIFICATIONS

(kit includes 9 models, 10 of each, 90 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.	Evaluation Board
		Over frequency, GHz								Output (1dB Compr.)		Input ³	NF (dB) Typ.	IP3 (dBm) Typ.	In DC-3 GHz	In 3-f _u GHz	Out DC-3 GHz	Out 3-f _u GHz	I (mA)	P (mW)	Current (mA)	Device Volt.			θ _{jc} Typ. °C/W	
		f _c -f _u	0.1	1	2	3	4	6	8	Min @ 2 GHz	Typ.	Min										Typ.	Min.	Max		
**GALIM1+	DC-8	12.7	12.5	11.8	11.3	10.5	10.5	11.0	9	12.2	10.5	15	4.5	27	1.3	1.7	1.4	1.8	55	225	40	3.4	3.0	4.1	108	TB-409-1+
GALIM21+	DC-8	14.3	13.9	13.1	12.4	11.5	11.9	9.0	11.5	12.6	10.5	15	4.0	27	1.1	1.5	1.3	2.5	55	225	40	3.5	3.0	4.1	128	TB-409-21+
GALIM2+	DC-8	16.2	15.8	14.8	13.7	12.7	13.2	15.1	12	12.9	11.0	15	4.6	27	1.6	2.5	1.6	2.6	55	225	40	3.5	3.0	4.1	101	TB-409-2+
GALIM33+	DC-4	19.3	18.7	17.5	16.3	15.5	15.8	-	16	13.4	11.4	13	3.9	28	1.6	2.0	1.2	1.3	55	265	40	4.3	3.8	4.8	110	TB-409-33+
GALIM3+	DC-3	22.4	21.1	19.1	17.3	16.1	15.8	-	17.5	12.5	10.5	13	3.5	25	1.5	-	1.2	-	55	225	35	3.3	3.0	4.1	127	TB-409-3+
GALIM6+	DC-4	12.2	12.2	11.8	11.3	11.4	12.3	-	10	18.2	16.5	20	4.5	35.5	1.5	1.4	1.8	2.0	85	475	70	5.0	4.6	5.6	93	TB-409-6+
GALIM4+	DC-4	14.4	14.1	13.5	12.9	12.5	13.1	-	11	17.5	16.0	20	4.0	34	1.2	1.2	1.4	1.7	85	475	65	4.6	4.2	5.5	93	TB-409-4+
GALIM51+	DC-4	18.1	17.5	16.1	14.7	13.7	13.4	-	14	18.0	16.5	13	3.5	35	1.3	1.2	1.5	1.7	85	475	65	4.5	4.2	5.5	78	TB-409-51+
GALIM5+	DC-4	20.6	19.4	17.5	16.0	14.9	15.1	-	16	18.0	16.0	13	3.5	35	1.2	1.2	1.4	1.4	85	475	65	4.4	4.0	4.9	103	TB-409-5+

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 2 GHz, except GALI-4+, 5+, 6+ @ 1 GHz.

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

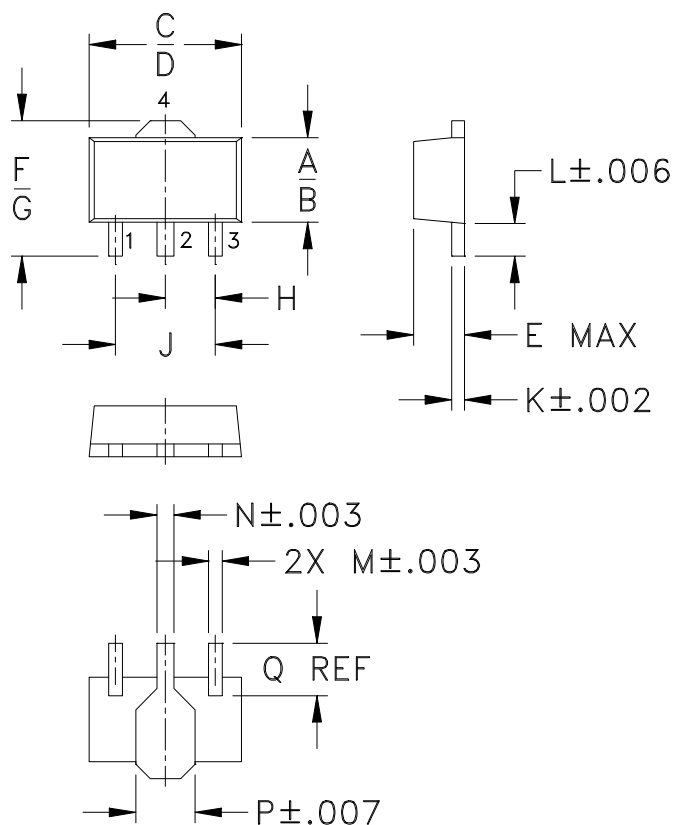
4. Supply voltage must be connected to pin 3 through a bias resistor in order to prevent damage. Reliability predictions are applicable at specified current and normal operating conditions.

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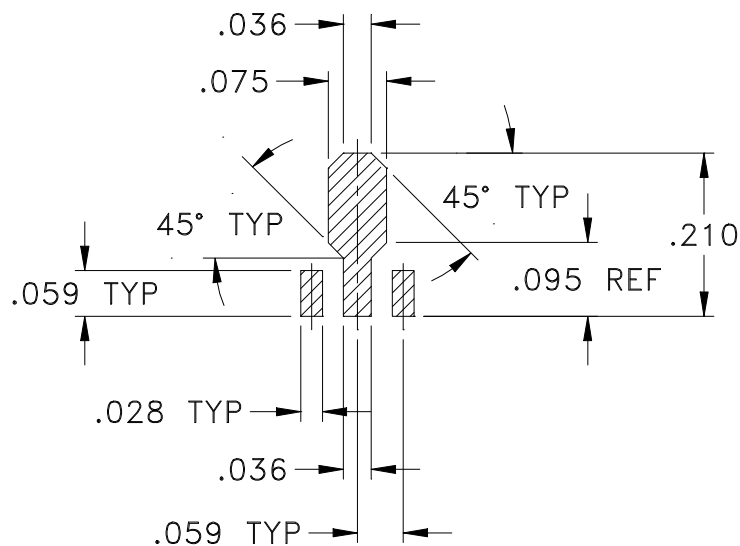
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REV. C
ECO-009046
K4-GALI+
MCL NY
080221

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>

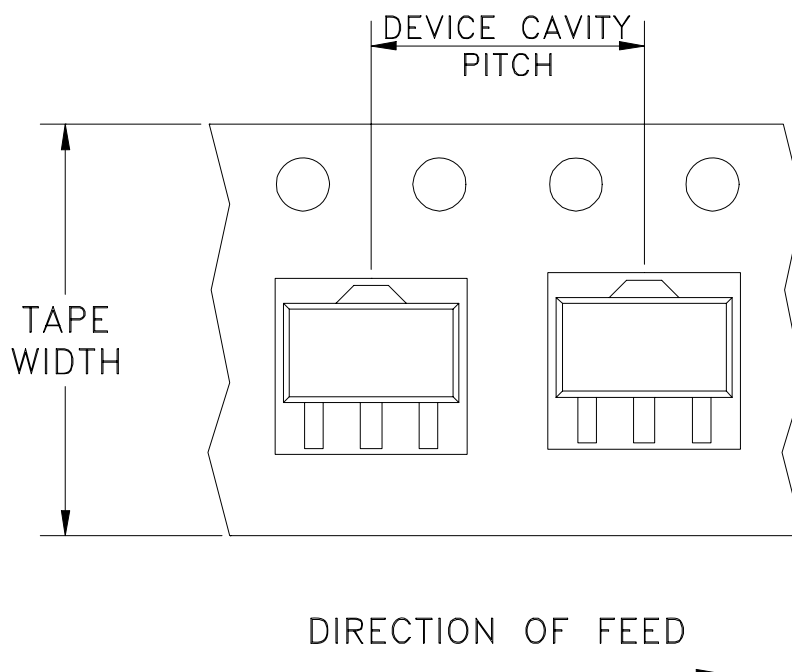
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Mini-Circuits ISO 9001 & ISO 14001 Certified

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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