



DESIGNER'S KIT K3-ERASM+

# Wideband Amplifiers

Mini-Circuits

50Ω DC to 4 GHz



## FEATURES

- Wideband, 50 Ω
- Up to +18.4 dBm typ. output power
- Low thermal resistance
- Miniature microwave amplifier
- Plastic micro-x surface mount package

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



Evaluation boards available.  
See individual model data sheets.



## K3-ERASM+ ELECTRICAL SPECIFICATIONS

(kit includes 3 models, 10 of each, 30 total)

Model	Freq. <sup>1</sup> (GHz)	Gain (dB) Typical						Maximum Power (dBm) @ 1 GHz			Dynamic Range @ 1 GHz		VSWR (:1) Typ.				Absolute Max. Rating <sup>2</sup>		DC <sup>3</sup> Operating Power @ pin 3			Therm. Resist.	Evaluation Board	
		Over frequency, GHz						Output (1dB Compr.)		NF (dB) Typ.	IP3 (dBm) Typ.	In DC-3 GHz	In 3-f <sub>u</sub> GHz	Out DC-3 GHz	Out 3-f <sub>u</sub> GHz	I (mA)	P (mW)	Cur- rent (mA)	Device Volt.			θ <sub>jc</sub> Typ. °C/W		
		0.1	1	2	3	4	Min @ 2 GHz	Typ.	Min										Typ.	Typ.	Min.			Max
ERA-4SM+	DC-4	14.3	14.0	13.4	12.7	11.8	11	17.3	15.0	20.0	4.2	34.0	1.2	1.2	1.3	1.8	120	650	65	4.5	4.2	5.5	196	TB-408-4+
ERA-5SM+	DC-4	20.2	19.5	17.6	15.6	14.0	16	18.4	16.5	13.0	4.3	32.5	1.3	1.3	1.2	1.3	120	650	65	4.9	4.2	5.5	133	TB-408-5+
ERA-6SM+	DC-4	12.6	12.5	12.2	11.7	11.3	10.5	17.9	16.0	20.0	4.5	36.0	1.3	1.2	1.6	1.8	120	650	70	5.0	4.6	5.6	143	TB-408-6+

1. Low frequency cutoff determined by external coupling capacitors. f<sub>u</sub> 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 through a bias resistor in order to prevent damage. See "Biasing MMIC Amplifiers" at [minicircuits.com/applications.shtml](http://minicircuits.com/applications.shtml).

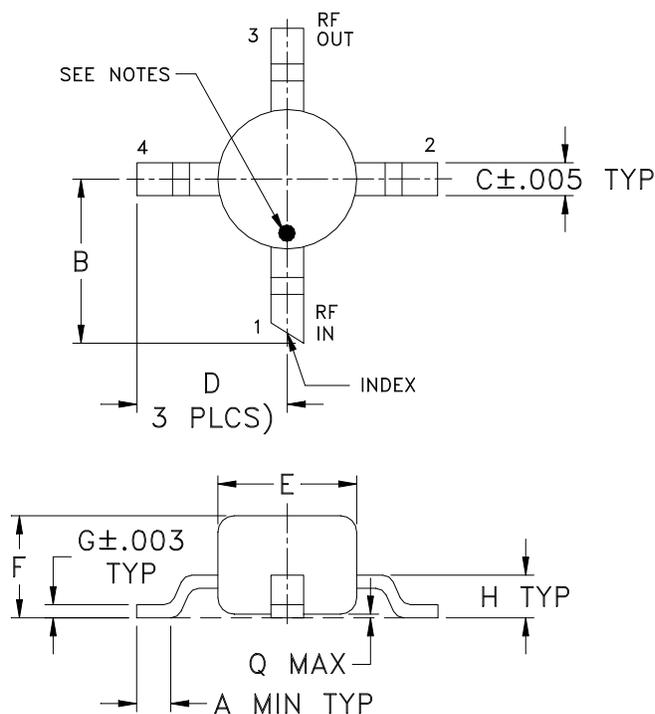
Reliability predictions are applicable at specified current and normal operating conditions.

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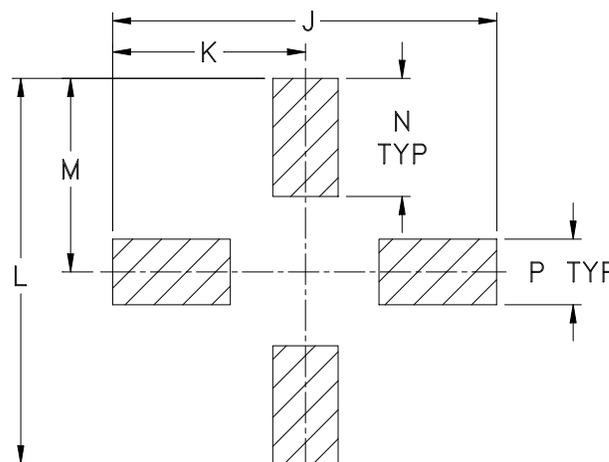
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REV. A  
ECO-009046  
M106033  
K3-ERASM+  
MCL NY  
080221

### 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	N	P	Q	WT. GRAMS
WW107	.012 (0.30)	.10 (2.54)	.020 (0.51)	.092 (2.34)	.085 (2.16)	.060 (1.52)	.007 (0.18)	.026 (0.66)	.235 (5.97)	.118 (3.00)	.235 (5.97)	.118 (3.00)	.072 (1.83)	.040 (1.02)	.020 (0.51)	.015

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

#### Notes:

- Case material: Plastic.
- Termination finish:  
For RoHS Case Styles: Matte tin Plate.  
For RoHS-5 Case Styles: Tin-Lead plate.
- RF input termination (1) identified by one or both of the following at factory option:
  - diagonally cut termination, which may be  $45^\circ$  (ref) in either direction;
  - orientation mark on the case. Model dash number is identified by color dot or alphanumeric code on case. See specification data sheet.



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

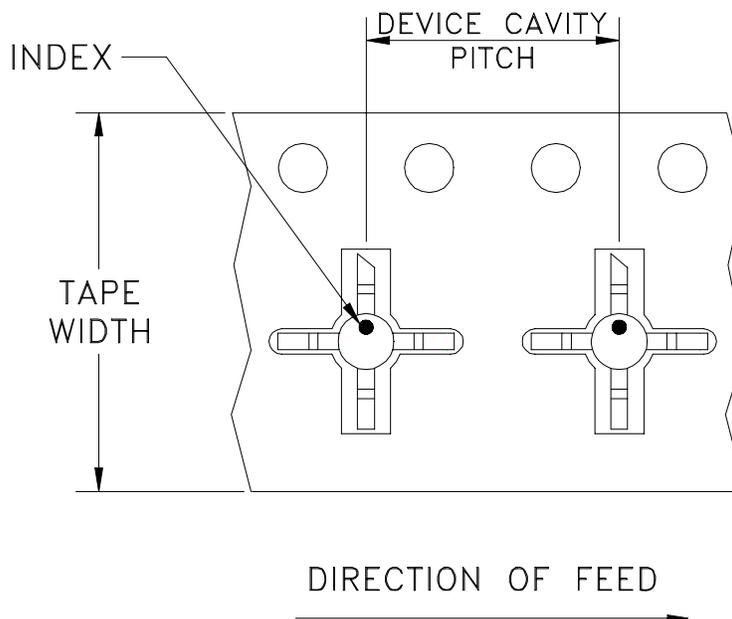
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# Tape & Reel Packaging TR-F4

## DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
12	8	7	Small quantity standards (see note)	20
				50
				100
				200
				500
		7	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](http://www.minicircuits.com/pages/pdfs/tape.pdf)



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