

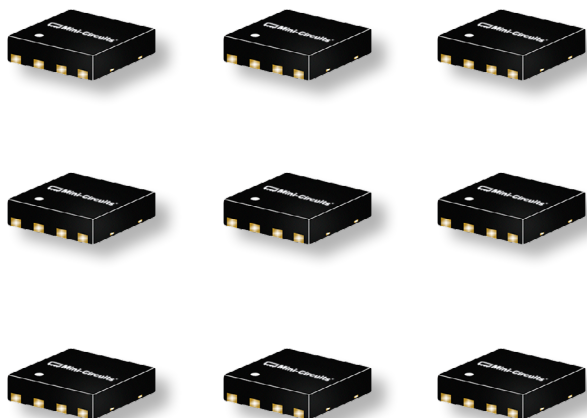


Mini-Circuits

DESIGNER'S KIT K1-EQY24+

MMIC Equalizers

50Ω DC to 20 GHz



FEATURES

- Wide Bandwidth DC-20 GHz, 50Ω
- Input power 2W max.
- Excellent VSWR
- Miniature 2 x 2mm case
- Low cost

MINI-CIRCUITS DESIGNER'S KITS
SPEED UP
THE SOLUTION



K1-EQY24+ ELECTRICAL SPECIFICATIONS

(kit includes 7 models, 5 of each, 35 total)

| Model | Frequency (GHz) fL-fU | Insertion loss (dB) Typ. | | | VSWR (:1) Typ. | | | Input Power ¹ (dBm) Max. |
|------------|-----------------------------|-----------------------------|-----------|-----------|-------------------|-----------|-----------|---|
| | | DC GHz | 10 GHz | 20 GHz | DC GHz | 10 GHz | 20 GHz | |
| EQY-2-24+ | DC-20 | 3 | 1.7 | 0.9 | 1.04 | 1.16 | 1.11 | 31 |
| EQY-3-24+ | DC-20 | 3.8 | 2.4 | 0.7 | 1.01 | 1.15 | 1.02 | 34 |
| EQY-5-24+ | DC-20 | 5.8 | 3.3 | 0.7 | 1.13 | 1.24 | 1.06 | 34 |
| EQY-6-24+ | DC-20 | 6.8 | 3.8 | 0.5 | 1.11 | 1.22 | 1.16 | 31 |
| EQY-8-24+ | DC-20 | 9.1 | 5.2 | 0.8 | 1.06 | 1.18 | 1.1 | 34 |
| EQY-10-24+ | DC-20 | 11.1 | 5.8 | 0.9 | 1.11 | 1.18 | 1.09 | 33 |
| EQY-12-24+ | DC-20 | 13.4 | 6.4 | 1.4 | 1.08 | 1.09 | 1.24 | 30 |

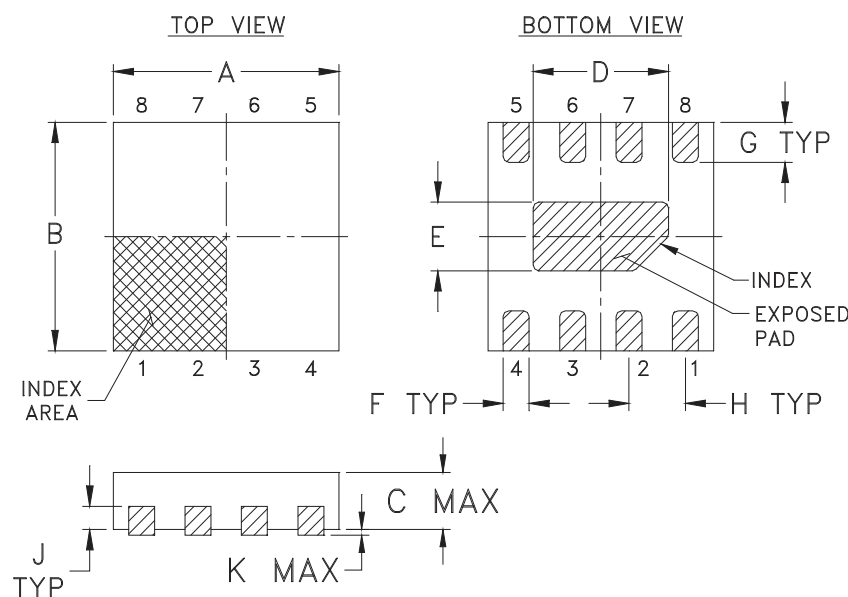
1. RF Power at 25°C case temperature. Check Individual Model Data Sheet for derated power at 105°C

Mini-Circuits

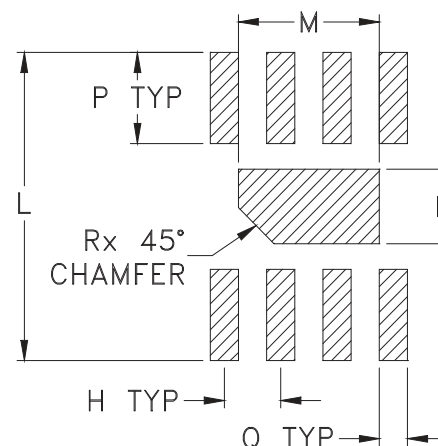
www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. A
ECO-009230
M172553
K1-EQY24+
APP/CP
210812

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within ± 0.002

| SE #. | A | B | C | D | E | F | G | H | J | K | L | M | N | P |
|----------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|
| MC1631-1 | .079 (2.00) | .079 (2.00) | .039 (1.00) | .047 (1.20) | .024 (.60) | .009 (.23) | .014 (.35) | .020 (.50) | .008 (.20) | .002 (.05) | .106 (2.70) | .049 (1.25) | .026 (.65) | .031 (.80) |

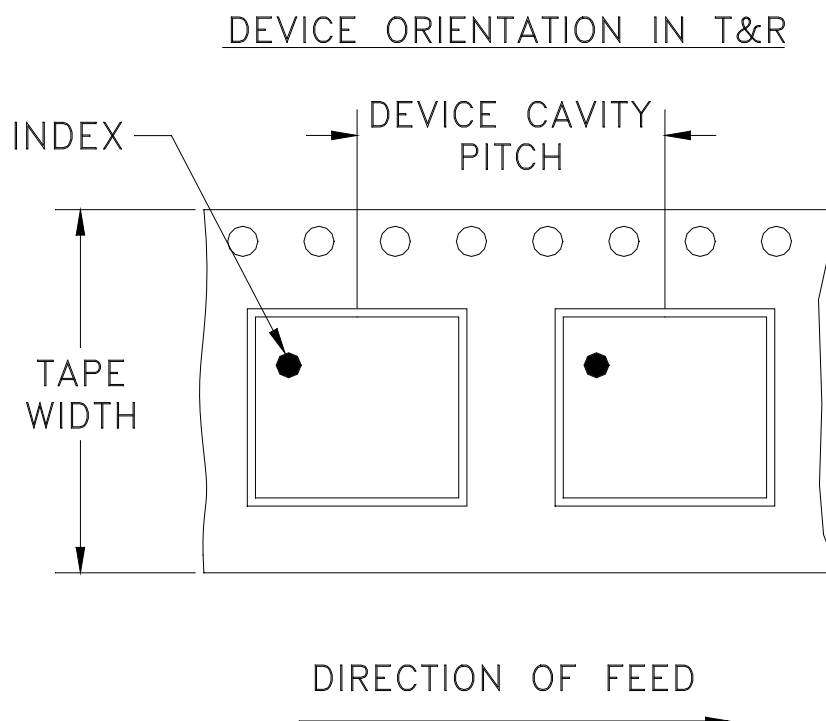
| CASE #. | Q | R | WT, GRAM |
|----------|---------------|---------------|----------|
| MC1631-1 | .010 (.25) | .012 (.30) | .006 |

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

Notes:

- Case material: Plastic.
- Termination finish:
For RoHS Case Styles: Tin-Silver over Nickel plated or Matte-Tin Plated (See Data sheet).
All models, (+) suffix.
- Lead #1 identifier shall be located in the cross-hatched area shown.
Identifier may be either a molded or marked feature.

Tape & Reel Packaging TR-F66



| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|-------------------|----------------------------|----------------------|-------------------------------|------------------|
| 8 | 4 | 7 | Small quantity standard | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | | | 500 |
| | | 7 | Standard | 1000, 2000, 3000 |

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



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|--------------------------------|--|---|
| Operating Temperature | -40° to 85° C or -45° to 85° C or -55° to 105° C or -40° to 105° C or -40° to 95° C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C or -65° to 150° Ambient Environment | Individual Model Data Sheet |
| HTOL | 1000 hours at 125°C | MIL-STD-883, Method 1005, Condition B |
| Thermal Shock | -55° to 100°C, 100 cycles | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Mechanical Shock | 1.5Kg, 0.5 ms, 5 shock pulses, Y1 direction only | MIL-STD-883, Method 2002, Condition B, except Y1 direction only |
| Vibration (Variable Frequency) | 50g peak | MIL-STD-883, Method 2007, Condition B |
| Autoclave | 15 psig, 100% RH, 121°C, 96 hours | JESD22-A102, Condition C |
| HAST | 130°C, 85% RH, 96 hours | JESD22-A110 |
| Solderability | 10X Magnification | J-STD-002, Para 4.2.5, Test S, 95% Coverage |
| Solder Reflow Heat | Sn-Pb Eutetic Process: 240°C peak Pb-Free Process: 260°C peak | J-STD-020, Table 4-1, 4-2 and 5-2; Figure 5-1 |
| Moisture Sensitivity: Level 1 | Bake at 125°C for 24 hours Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 260°C peak | J-STD-020 |



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|--------------------------------|---|-------------------------|
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215 |