



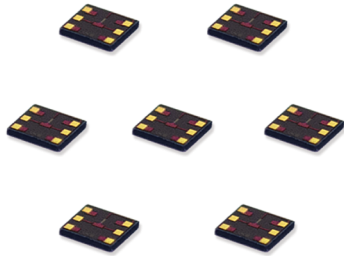
DESIGNER'S KIT K1-EQY-24-DG+

# Gain Equalizer Dice

50Ω DC to 20 GHz

## FEATURES

- Wide bandwidth operation, DC to 20 GHz, 50Ω
- Input Power up to 2.5W
- Excellent VSWR



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



## K1-EQY-24-DG+ ELECTRICAL SPECIFICATIONS

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

Model	Frequency (GHz) $f_L$ - $f_U$	Insertion loss (dB) Typ.			VSWR (:1) Typ.			Input Power <sup>1</sup> (dBm) Max.
		DC GHz	10 GHz	20 GHz	DC GHz	10 GHz	20 GHz	
EQY-2-24-DG+	DC-20	3.0	1.8	0.9	1.04	1.15	1.26	20
EQY-3-24-DG+	DC-20	3.8	2.4	0.8	1.01	1.24	1.27	20
EQY-5-24-DG+	DC-20	5.7	3.4	0.8	1.14	1.21	1.32	20
EQY-6-24-DG+	DC-20	6.8	3.9	0.7	1.11	1.30	1.40	20
EQY-8-24-DG+	DC-20	9.1	5.3	1.1	1.05	1.31	1.44	20
EQY-10-24-DG+	DC-20	11.1	5.9	1.1	1.11	1.28	1.48	20
EQY-12-24-DG+	DC-20	13.4	6.6	1.5	1.10	1.17	1.44	20

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

## ASSEMBLY AND HANDLING PROCEDURE

### 1. Storage

Dice should be stored in a dry nitrogen purged desiccators or equivalent.

### 2. ESD

MMIC GaAs Equalizer dice are susceptible to electrostatic and mechanical damage. Die are supplied in anti-static protected material, which should be opened in clean room conditions at an appropriately grounded anti-static workstation. Devices need careful handling using correctly designed collets, vacuum pickup tips or sharp anti-static tweezers to deter ESD damage to dice.

### 3. Die Attach

The die mounting surface must be clean and flat. Using conductive silver filled epoxy, recommended epoxies are DieMat DM6030HK-PT/H579 or Ablestik 84-1LMISR4. Apply sufficient epoxy to meet required epoxy bond line thickness, epoxy fillet height and epoxy coverage around total die periphery. Parts shall be cured in a nitrogen filled atmosphere per manufacturer's cure condition. It is recommended to use antistatic die pick up tools only.

### 4. Wire Bonding

Bond pad openings in the surface passivation above the bond pads are provided to allow wire bonding to the dice gold bond pads. Thermosonic bonding is used with minimized ultrasonic content. Bond force, time, ultrasonic power and temperature are all critical parameters. Suggested wire is pure gold, 1 mil diameter. Bonds must be made from the bond pads on the die to the package or substrate. All bond wires should be kept as short as low as reasonable to minimize performance degradation due to undesirable series inductance.



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 -40° to 105° C or -55° to 105° C or -45° to 105° C Ambient Environment	Refer to Individual Model Data Sheet
Storage Environment (Die)	-65° to 150°C	Individual Model Data Sheet
Storage Environment(Packaging)	-40° to 70°C and 40 to 60% humidity (In Factory Shipped Package)	