

MPA 201

0.5 Watts, 12.5 Volts, Class A Linear to 500 MHz 50Ω Hybrid Amplifier

GENERAL DESCRIPTION

The MPA 201 is a COMMON EMITTER amplifier device designed for broadband performance to 500 MHz in a format suitable for stripline assembly and high reliability applications. Its wide dynamic range and flexibility commend it for a broad spectrum of instrumentation, receiver and transmitter applications. It utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C

6.0 Watts

Maximum Voltage and Current

Collector to Emitter Voltage **BVces** BVebo Emitter to Base Voltage Ic Collector Current **Maximum Temperatures** Storage Temperature **Operating Junction Temperature**

40 Volts 3.5 Volts 300 mAmps

 $-55 \text{ to} + 200^{\circ}\text{C}$

 $+200^{\circ}C$

CASE OUTLINE

55AU, Style 2

ELECTRICAL CHARACTERISTICS @ 25 °C

| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | ТҮР | MAX | UNITS |
|---------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|------------------|------|-----------------------------|
| Pout Pin Pg Ft VSWR | Power Out Power Input Power Gain Transition Frequency Load Mismatch Tolerance | F = 500 MHz Ic = 140 mA Vcc = 12.5 Volts Vce = 20 V, Ic = 140 A | 0.5 12 3.4 | 0.8 13 3.7 | 0.02 | Watts Watts dB GHz |

| BVebo | Emitter to Base Breakdown | Ie = 1 mA | 3.5 | | | Volts |
|-----------------|--------------------------------|------------------------|-----|-----|-----|-------|
| BVces | Collector to Emitter Breakdown | Ic =10 mA | 50 | | | Volts |
| BVceo | Collector to Emitter Breakdown | Ic = 10 mA | 22 | | | Volts |
| h _{FE} | DC Current Gain | Vce = 5 V, Ic = 100 mA | 20 | | | |
| Cob | Capacitance | Vcb = 28V, f = 1 MHz | | 2.0 | 3.0 | pF |
| θјс | I hermal Resistance | | | | 53 | °C/W |

Initial Issue July 1997

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