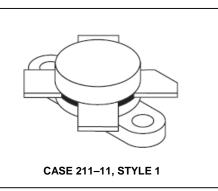


Designed for power amplifier applications in industrial, commercial and amateur radio equipment to 30 MHz.

- Specified 12.5 V, 30 MHz characteristics
- Output power = 80 W
- Minimum gain = 12 dB
- Efficiency = 50%

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Product Image



MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|------------------|-------------|---------------|
| Collector–Emitter Voltage | V _{CEO} | 25 | Vdc |
| Collector–Base Voltage | V _{CBO} | 45 | Vdc |
| Emitter–Base Voltage | V _{EBO} | 4.0 | Vdc |
| Collector Current — Continuous | Ι _C | 20 | Adc |
| Total Device Dissipation @ T _C = 25°C Derate above 25°C | PD | 250 1.43 | Watts W/∘C |
| Storage Temperature Range | T _{stg} | -65 to +150 | °C |

THERMAL CHARACTERISTICS

| Characteristic | Symbol 3 - | Max | Unit |
|--------------------------------------|------------------|-----|------|
| Thermal Resistance, Junction to Case | R _{eJC} | 0.7 | °C/W |

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted.)

| Characteristic | Symbol | Min | Тур | Max | Unit |
|---|----------------------|-----|-----|-----|------|
| OFF CHARACTERISTICS | | | | | |
| Collector–Emitter Breakdown Voltage (I _C = 100 mAdc, I _B = 0) | V _{(BR)CEO} | 18 | _ | _ | Vdc |
| Collector–Emitter Breakdown Voltage (I _C = 50 mAdc, V_{BE} = 0) | V _{(BR)CES} | 36 | _ | — | Vdc |
| Emitter-Base Breakdown Voltage (I _E = 10 mAdc, I _C = 0) | V _{(BR)EBO} | 4.0 | — | — | Vdc |
| ON CHARACTERISTICS | | | | • | |
| DC Current Gain (I _C = 5.0 Adc, V _{CE} = 5.0 Vdc) | h _{FE} | 40 | _ | 150 | _ |
| DYNAMIC CHARACTERISTICS | · | | | | |
| Output Capacitance (V _{CB} = 15 Vdc, I _E = 0, f = 1.0 MHz) | Cob | _ | _ | 250 | pF |

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| FUNCTIONAL | TESTS | (Figure 1) | |
|------------|-------|------------|--|

| G _{pe} | 12 | _ | — | dB |
|------------------|----------------------|---------------------------|--|------|
| η | 50 | _ | — | % |
| Z _{in} | _ | .938–j.341 | — | Ohms |
| Z _{out} | _ | 1.16–j.201 | — | Ohms |
| - | _ | 1.06 Ω 1817 pF | — | — |
| - | — | 1.19 Ω 777 pF | — | — |
| | η Z _{in} | η 50 Z _{in} — | η 50 — Z _{in} — .938–j.341 Z _{out} — 1.16–j.201 — — 1.817 pF — — — | |

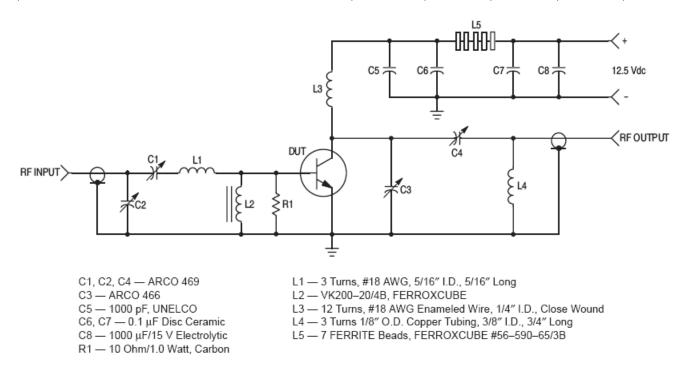


Figure 1. 30 MHz Test Circuit Schematic

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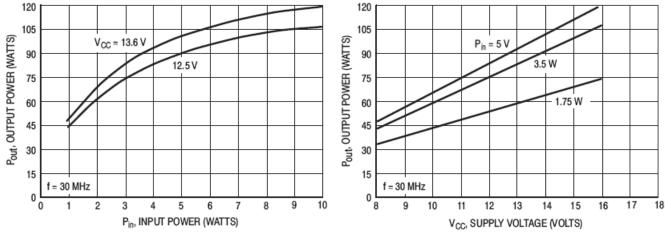
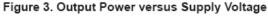


Figure 2. Output Power versus Input Power

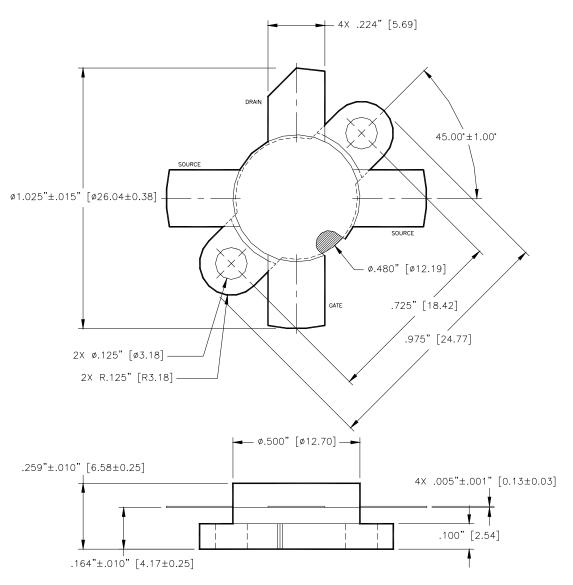


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Unless otherwise noted, tolerances are inches ±.005" [millimeters ±0.13mm]

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