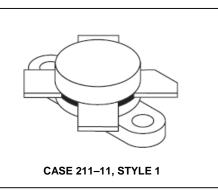


Designed for power amplifier applications in industrial, commercial and amateur radio equipment to 30 MHz.

- 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 <sub>CEO</sub>	25	Vdc
Collector–Base Voltage	V <sub>CBO</sub>	45	Vdc
Emitter–Base Voltage	V <sub>EBO</sub>	4.0	Vdc
Collector Current — Continuous	Ι <sub>C</sub>	20	Adc
Total Device Dissipation @ T <sub>C</sub> = 25°C Derate above 25°C	PD	250 1.43	Watts W/∘C
Storage Temperature Range	T <sub>stg</sub>	-65 to +150	°C

#### THERMAL CHARACTERISTICS

Characteristic	Symbol 3 -	Max	Unit
Thermal Resistance, Junction to Case	R <sub>eJC</sub>	0.7	°C/W

### ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted.)

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

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FUNCTIONAL	TESTS	(Figure 1)	

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

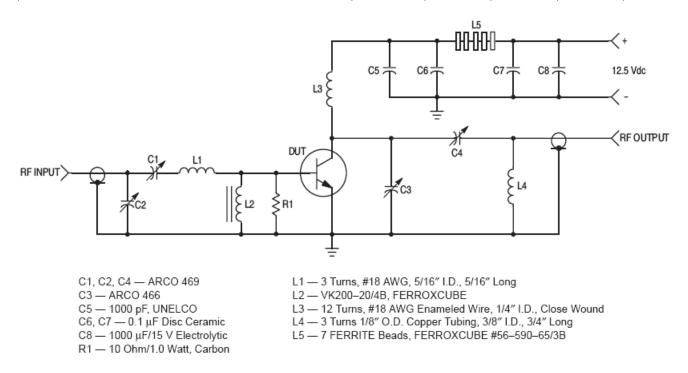


Figure 1. 30 MHz Test Circuit Schematic

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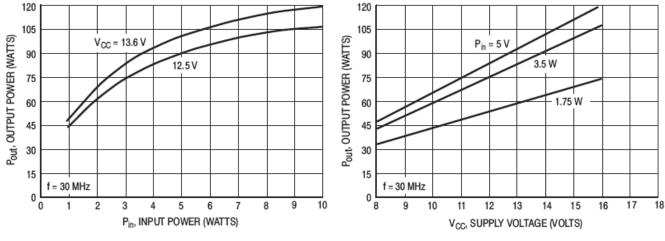
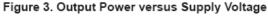


Figure 2. Output Power versus Input Power

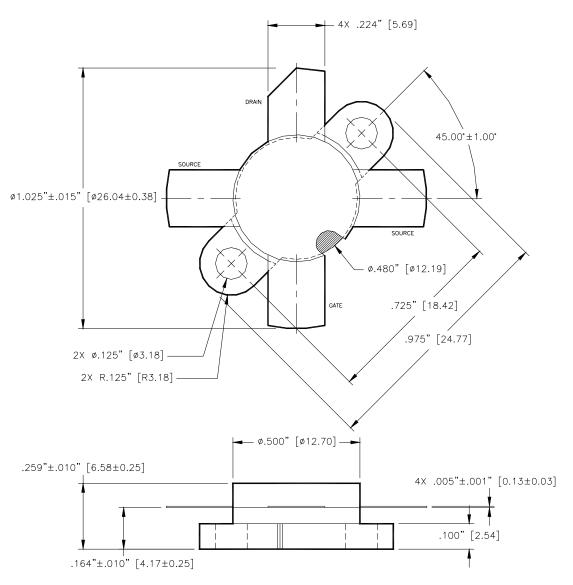


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Unless otherwise noted, tolerances are inches ±.005" [millimeters ±0.13mm]

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