

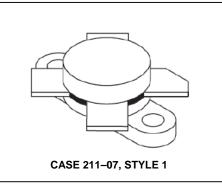


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Designed primarily for high-voltage applications as a high-power linear amplifier from 2.0 to 30 MHz. Ideal for marine and base station equipment.

- Specified 50 V, 30 MHz Characteristics Output power = 150 W (PEP) Minimum gain = 13 DB Efficiency = 45%
- Intermodulation distortion @ 150 W (PEP) IMD = -32 db (max.)
- 100% tested for load mismatch at all phase angles with 30:1 VSWR @ 150 W CW

Product Image



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	55	Vdc
Collector-Base Voltage	V _{CBO}	110	Vdc
Emitter-Base Voltage	V _{EBO}	4.0	Vdc
Collector Current — Continuous	lc	20	Adc
Withstand Current — 10 s	—	30	Adc
Total Device Dissipation @ T _C = 25 °C Derate above 25 °C	PD	320 1.83	Watts W/⁰C
Storage Temperature Range	T _{stg}	-65 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Мах	Unit
Thermal Resistance, Junction to Case	R _{eJC}	0.5	°C/W

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

Characteristic	Symbol	Min	Тур	Max	Unit

OFF CHARACTERISTICS

Commitment to produce in volume is not guaranteed.

Collector-Emitter Breakdown Voltage (I _C = 200 mAdc, I _B = 0)	V _{(BR)CEO}	55	_	_	Vdc
Collector-Emitter Breakdown Voltage (I _C = 100 mAdc, V _{BE} = 0)	V _{(BR)CES}	110	_	_	Vdc
Collector-Base Breakdown Voltage ($I_C = 100 \text{ mAdc}, I_E = 0$)	V _{(BR)CBO}	110	_	_	Vdc
Emitter-Base Breakdown Voltage (I _E = 10 mAdc, I _C = 0)	V _{(BR)EBO}	4.0	_	_	Vdc

(continued)

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ELECTRICAL CHARACTERISTICS - continued (T_c = 25 °C unless otherwise noted.)

Characteristic	Symbol	Min	Тур	Max	Unit
ON CHARACTERISTICS				1	1
DC Current Gain (I _C = 5.0 Adc, V _{CE} = 5.0 Vdc)	h _{FE}	10	30	-	_
DYNAMIC CHARACTERISTICS					
Output Capacitance (V _{CB} = 50 Vdc, I _E = 0, f = 1.0 MHz)	Сов	_	220	250	pF
FUNCTIONAL TESTS					
Common-Emitter Amplifier Gain (V _{CC} = 50 Vdc, P _{OUT} = 150 W (PEP), I _C (max) = 3.32 Adc, f = 30 MHz)	G _{PE}	13	15	-	dB
Output Power (V _{CE} = 50 Vdc, f = 30 MHz)	Pout	150	-	-	W (PEP)
Collector Efficiency (V _{CC} = 50 Vdc, P _{OUT} = 150 W (PEP), I _C (max) = 3.32 Adc, f = 30 MHz)	η	45	-	-	%
Intermodulation Distortion (1) (V _{CE} = 50 Vdc, P _{OUT} = 150 W (PEP), I _C = 3.32 Adc)	IMD	_	-33	-30	dB
Electrical Ruggedness (V _{CC} = 50 Vdc, P _{OUT} = 150 W (PEP), I _C (max) = 3.32 Adc, VSWR 30:1 at all Phase Angles)	Ψ	No Degradation in Output Power			

NOTE:

1. To Mil-Std-1311 Version A, Test Method 2204B, Two Tone, Reference each Tone.

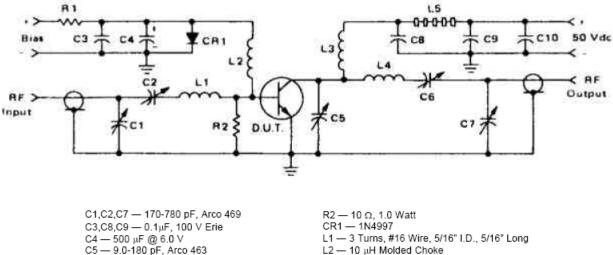
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- C4 500 μF @ 6.0 V C5 — 9.0-180 pF, Arco 463 C6 — 80-480 pF, Arco 466 C10 — 30 μF, 100 V R1 — 10 Ω, 10 Watt
- L3 12 Turns, #16 Enameled Wire Closewound, 1/4" I.D.
- L4 5 Turns, 1/8" Copper Tubing, 9/16" I.D., 3/4" Long
- L5 10 Ferrite Beads Ferroxcube #56-590-65/3B

Figure 1. 30 MHz Test Circuit Schematic

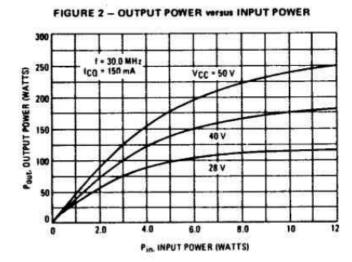
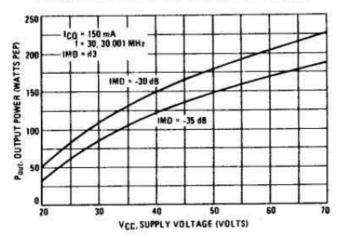


FIGURE 3 - OUTPUT POWER WITSUS SUPPLY VOLTAGE

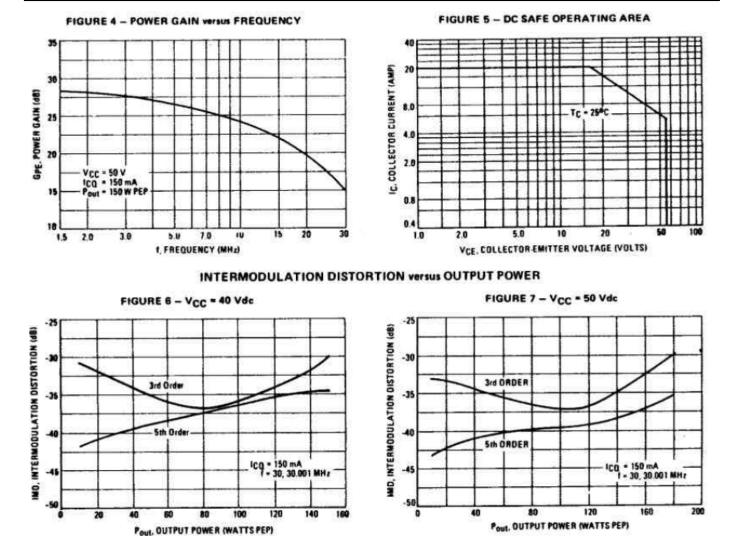


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The RF Line NPN Silicon Power Transistor 150W(PEP), 30MHz, 28V

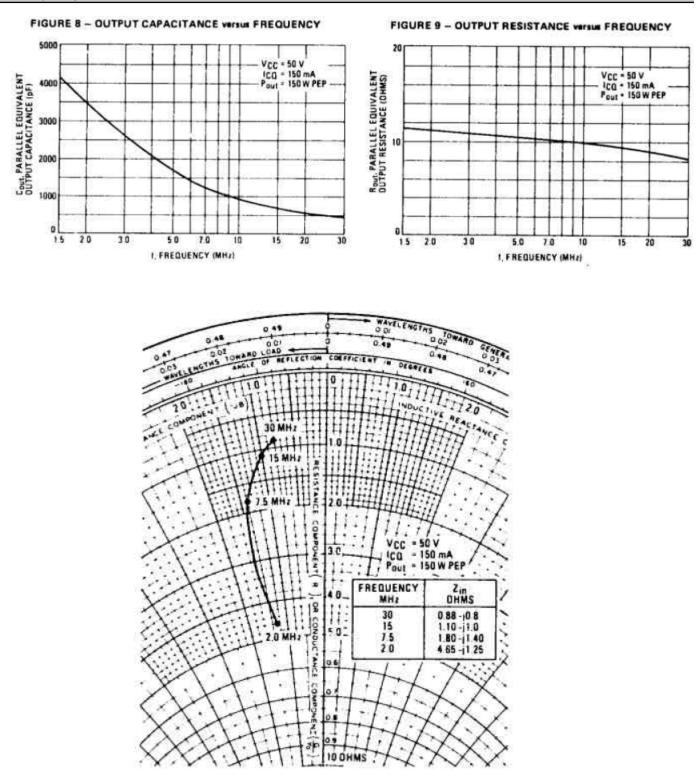


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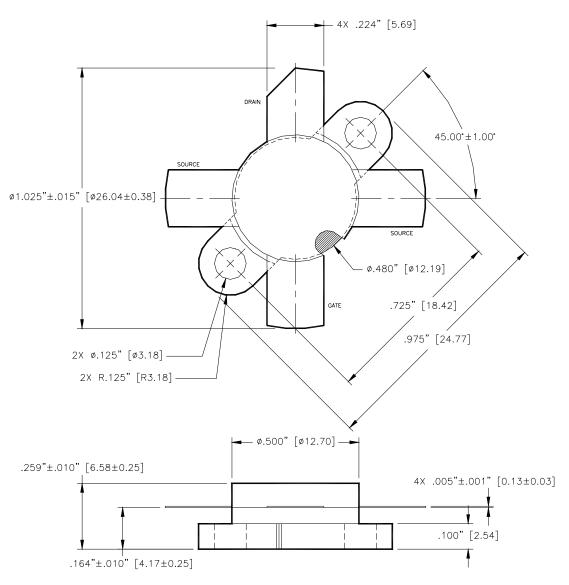
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Unless otherwise noted, tolerances are inches ±.005" [millimeters ±0.13mm]

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