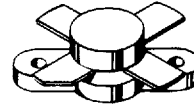


MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA
PT9798
The RF Line
SSB Power Transistor

2

... designed primarily for wideband, large-signal output and driver amplifier stages in the 2 to 30 MHz frequency range.

- Designed for Class A, AB or C Power Amplifiers
- Specified 50 Volt, 28 MHz Characteristics:
 - Output Power — 75 Watts
 - Power Gain — 15 dB Min
- 100% Tested for Load Mismatch at all Phase Angles with $\infty:1$ VSWR
- Gold Metallization for Improved Reliability
- Diffused Ballast Resistors

2-30 MHz
75 WATTS
50 VOLT
SSB POWER
TRANSISTOR
NPN SILICON

CASE 211-07, STYLE 1
(.380 SOE F)
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	Vdc
Collector Current — Continuous	I_C	15	Adc
Total Device Dissipation (at $T_C = 25^\circ\text{C}$ Derate above 25°C)	P_D	150 1	Watts W/ $^\circ\text{C}$
Operating Junction Temperature	T_J	200	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 50$ mA, $I_B = 0$)	$V_{(BR)CEO}$	55	—	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 100$ mA, $I_E = 0$)	$V_{(BR)CBO}$	110	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 5$ mA, $I_C = 0$)	$V_{(BR)EBO}$	4	—	—	Vdc

ON CHARACTERISTICS

DC Current Gain ($I_C = 1$ A, $V_{CE} = 5$ V)	h_{FE}	10	—	70	—
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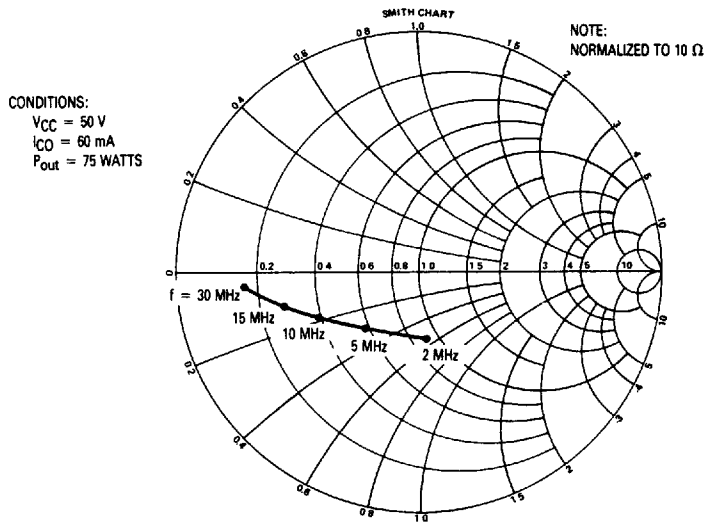
FUNCTIONAL TESTS

Common-Emitter Amplifier Power Gain ($V_{CE} = 50$ V, $P_{out} = 75$ W, $f = 28$ MHz)	G_{PE}	15	—	—	dB
Load Mismatch ($V_{CE} = 50$ V, $P_{out} = 75$ W PEP, $f = 28$ MHz, Load VSWR = $\infty:1$, All Phase Angles)	ψ	No Degradation in Output Power			
Intermodulation Distortion ($V_{CE} = 50$ Vdc, $P_{out} = 75$ W, $f = 28$ MHz)	IMD	—	—	-32	dB

MOTOROLA RF DEVICE DATA

2-1132

TYPICAL CHARACTERISTICS



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Figure 1. Series Equivalent Input Impedance