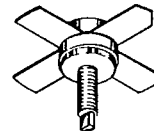


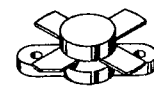
MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA
The RF Line
VHF Power Transistors

... designed for 12.5 Volt, mid-band large-signal amplifier applications in industrial and commercial FM equipment operating in the 40 to 100 MHz range.

- Specified 12.5 V, 88 MHz Characteristics:
Output Power — 12 Watts
Minimum Gain — 8 dB
Efficiency — 60%
- 100% Tested for Load Mismatch at All Phase Angles with 20:1 VSWR
- Diffused Ballast Resistors

PT8862
PT8862A
8 dB
88 MHz
12 WATTS
VHF POWER
TRANSISTORS


.380 SOE
CASE 145D-01, STYLE 1
PT8862A



.380 SOE F
CASE 211-07, STYLE 1
PT8862

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	16	V _{dc}
Collector-Base Voltage	V _{CBO}	36	V _{dc}
Emitter-Base Voltage	V _{EBO}	4	V _{dc}
Collector Current — Continuous	I _C	5	A _{dc}
Total Device Dissipation @ T _C = 25°C Derate above 25°C	P _D	25 0.833	Watts W/°C
Operating Junction Temperature	T _J	200	°C
Storage Temperature Range	T _{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	1.2	°C/W

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

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}	16	—	—	V _{dc}
Collector-Base Breakdown Voltage (I _C = 50 mA, I _E = 0)	V _{(BR)CBO}	36	—	—	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 10 mA, I _C = 0)	V _{(BR)EBO}	4	—	—	V _{dc}

ON CHARACTERISTICS

DC Current Gain (I _C = 1 A, V _{CE} = 5 V)	h _{FE}	10	—	200	—
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FUNCTIONAL TESTS

Common-Emitter Amplifier Power Gain (V _{CE} = 12.5 V, P _{out} = 12 W, f = 88 MHz)	G _{PE}	8.2	—	—	dB
Collector Efficiency (V _{CE} = 12.5 V, P _{out} = 12 W, f = 88 MHz)	η _c	60	—	—	%
Load Mismatch (V _{CE} = 15.5 V, P _{in} = 1.8 W, f = 88 MHz, Load VSWR = 20:1, All Phase Angles)	ψ	No Degradation in Output Power			