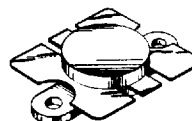


T-33-11

CD6150
(See LT4217)**MOTOROLA**
SEMICONDUCTOR
TECHNICAL DATA**JO2015A****The RF Line**
UHF Power Transistor

The JO2015A is an internally matched NPN silicon UHF power transistor. Its multicell design allows optimum heat dissipation and operating efficiency. A slotted-grid finger structure assures uniform current injection. Ruggedability and long-term reliability are guaranteed by unique, diffused silicon ballasting resistors coupled with a refractory-gold passivated metallization system.

- 50 W — P_{out} (65 W — P_{sat})
- 28 V — V_{CC}
- 225–400 MHz
- Internally Matched
- Gold Metallization

50 W — 400 MHz
UHF POWER
TRANSISTOR500 J ZERO
CASE 316A-01, STYLE 1**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	Vdc
Collector-Base Voltage	V_{CBO}	65	Vdc
Emitter-Base Voltage	V_{EBO}	3.5	Vdc
Collector Current — Continuous	I_C	10	Adc
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	$R_{\theta JC}$	1.25	°C/W

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 50\text{ mA}$, $I_E = 0$)	$V_{(BR)CEO}$	30	—	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 100\text{ mA}$, $I_E = 0$)	$V_{(BR)CBO}$	65	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 5\text{ mA}$, $I_C = 0$)	$V_{(BR)EBO}$	3.5	—	—	Vdc

ON CHARACTERISTICS

DC Current Gain ($I_C = 1\text{ A}$, $V_{CE} = 10\text{ V}$)	h_{FE}	10	—	100	—
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DYNAMIC CHARACTERISTICS

Output Capacitance ($V_{CB} = 28\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$)	C_{ob}	—	—	80	pF
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FUNCTIONAL TESTS

Common-Emitter Amplifier Power Gain ($V_{CE} = 28\text{ V}$, $P_{out} = 50\text{ W}$, $f = 400\text{ MHz}$, $I_Q = 100\text{ mA}$)	G_{PE}	10	—	—	dB
Collector Efficiency ($V_{CE} = 28\text{ V}$, $I_Q = 100\text{ mA}$, $P_{out} = 50\text{ W}$, $f = 400\text{ MHz}$)	η_c	55	—	—	%
Load Mismatch ($V_{CE} = 28\text{ V}$, $P_{out} = 50\text{ W}$, $f = 400\text{ MHz}$, Load VSWR = 10:1, All Phase Angles)	ψ	No Degradation in Output Power			
Saturated Output Power ($V_{CE} = 28\text{ V}$, $f = 400\text{ MHz}$, $I_Q = 100\text{ mA}$)	P_{sat}	65	—	—	W