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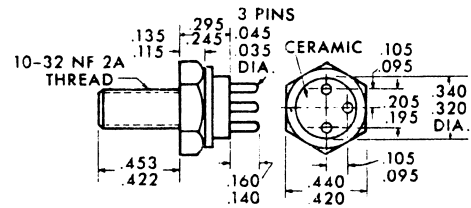
**NPN Silicon Planar  
 Epitaxial VHF Power  
 Transistor**

**APPLICATIONS**

This device is specifically designed for VHF & UHF power amplifiers and oscillator (100-400mc) applications. The use of passivated epitaxial techniques minimizes saturation voltage at high currents. Use of a multiple emitter structure results in high efficiency and gain characteristics desirable in UHF applications.

**MECHANICAL OUTLINE**

**TO-60 Package - Collector Isolated**



**FEATURES**

- Low Saturation Voltage
- Low Leakage
- Epitaxial Planar Structure
- Isolated Collector

<b>V<sub>CB0</sub></b>	65	Volts
<b>V<sub>CEO</sub></b>	40	Volts
<b>V<sub>EB0</sub></b>	4	Volts
<b>Collector Current - I<sub>C</sub></b>	3.0	Amps.
<b>Transistor Dissipation</b>		
25°C	23	Watts
at case temp. }		
above 25°C	Derate Linearly to 0 Watts at 200°C	
<b>Max. Temp. - Operating &amp; Storage</b>	-65 to 200	°C

SYMBOL	PARAMETERS	TEST CONDITIONS	MIN.	MAX.	UNITS
I <sub>CEO</sub>	Collector-Cutoff Current	V <sub>CE</sub> = 30V	-	.25	mA
V <sub>CB0</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 100μA, I <sub>E</sub> = 0	35	-	V
V <sub>CEV</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 0-200mA*, V <sub>BE</sub> = -1.5V	65	-	V
V <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 0-200mA*	40**	-	V
V <sub>EB0</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 100μA, I <sub>C</sub> = 0	4	-	V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 500mA, I <sub>B</sub> = 100mA	-	1	V
C <sub>ob</sub>	Collector Capacitance	V <sub>CB</sub> = 30V	-	20	pf
C <sub>s</sub>	Collector-to-Case Capacitance		-	6	pf
f <sub>T</sub>	Gain Bandwidth Product	V <sub>CE</sub> = 28V, I <sub>C</sub> = 150mA	400 Typ.	-	Mc
f <sub>bb</sub>	Base Spreading Resistance	V <sub>C</sub> = 28V, I <sub>C</sub> = 250mA, t = 300mc	6.5 Typ.	-	Ω
P <sub>out</sub>	Power Output - V <sub>CE</sub> = 28V Amplifier Unneutralized	I <sub>C</sub> = 688mA, P <sub>in</sub> = 3.5w, f = 175mc, η = 70%	13.5	-	W
		I <sub>C</sub> = 597mA, P <sub>in</sub> = 5w, f = 260mc, η = 60%	10 Typ.	-	W

\*Pulsed through 25mh inductor; Duty Cycle = 25%

\*\*Measured at a current where the breakdown voltage is a minimum.