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## NTE317 Silicon NPN Transistor RF Power Output

**Description:**

The NTE317 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for HF communications. This device utilizes improved metallization systems to achieve extreme ruggedness under severe operating conditions.

**Features:**

- 70W Minimum with Greater than 13.5dB Gain
- Withstands Severe Mismatch under Operating Conditions
- Emitter Ballasted
- Low Inductance Stripline Package

**Absolute Maximum Ratings:**

Collector Base Voltage, $V_{CBO}$ .....	36V
Collector-Emitter Voltage, $V_{CEO}$ .....	18V
Emitter-Base Voltage, $V_{EBO}$ .....	4V
Maximum Collector Current, $I_C$ .....	15A
Total Device Dissipation (+25°C), $P_T$ .....	220W
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	0.8°C/W
Junction Temperature Range, $T_J$ .....	-65° to +200°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +200°C

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50mA, I_B = 0$ , Note 1	18	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 20mA, V_{BE} = 0$ , Note 1	36	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 5mA, I_C = 0$	4	-	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 15V, I_E = 0$	-	-	3	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 5A$	10	-	-	
Gain Bandwidth	$f_t$	$V_{CE} = 13.5V, I_C = 100mA$	200	-	-	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 12.5V, I_C = 0$ , $-F_O = 1.0MHz$	-	300	-	pF
Amplifier Power Out	$P_O$	30MHz/12.5V	70	-	-	W
Amplifier Power Gain	$P_g$		13.5	14.2	-	dB

Note 1. Pulsed through 25mH Inductor

