

NTE315

Silicon NPN Transistor, Medium Power Amp

Features:

- AF – HF Medium Power Amplifier

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-to-Base Voltage, V_{CBO}	100V
Collector-to-Emitter Voltage, V_{CEO}	50V
Emitter-to-Base Voltage, V_{EBO}	6V
Collector Current, I_C	1A
Base Current, I_B	0.5A
Collector Power Dissipation, P_C	750mW
Junction Temperature, T_J	+120°C
Storage Temperature Range, T_{stg}	-50° to +150°C
Thermal Resistance, Junction-to-Ambient, R_{thJA}	126°C/W

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 25V, I_E = 0$	–	–	0.2	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	–	–	0.2	μA
Base to Emitter Voltage	V_{BE}	$V_{CE} = 6V, I_C = 5\text{mA}$	–	–	0.7	V
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 2\text{mA}$	50	–	–	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 50\text{mA}$	–	–	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1A, I_B = 50\text{mA}$	–	–	1.0	V
DC Current Gain	h_{FE1}	$V_{CE} = 2V, I_C = 100\text{mA}$	199	–	649	
	h_{FE2}	$V_{CE} = 1V, I_C = 1A$	70	–	–	
Small Signal Current Gain	$ h_{fe} $	$V_{CB} = 2V, I_E = -10\text{mA},$ $f = 10\text{MHz}$	–	18	–	dB
Collector Output Capacitance	C_C	$V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$	–	16	40	pf

