NTE395
Silicon PNP Transistor
Wide Band Linear Amplifier

Absolute Maximum Ratings:

Collector–Base Voltage, V_{CBO} 30V

Collector–Emitter Voltage, V_{CEO} 25V

Emitter–Base Voltage, V_{EBO} 3V

Collector Current, I_C 50mA

Power Dissipation (T_A = +25°C), P_{tot} 225mW

Power Dissipation (T_C = +25°C), P_{tot} 360mW

Operating Junction Temperature, T_J . . . . +200°C

Storage Temperature Range, T_{stg} . . . . −55° to +200°C

Thermal Resistance, Junction–to–Case, R_{thJC} . . . . 485°C/W

Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . 775°C/W

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Cutoff Current	I_{CBO}	V_{CB} = 15V, I_E = 0	–	–	50	nA
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	30	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 5mA, I_B = 0	25	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	3	–	–	V
Static Forward Current Transfer Ratio	h_{21E}	V_{CE} = 10V, I_C = 10mA, Note 1	20	–	–	
Base–Emitter Voltage	V_{BE}	V_{CE} = 10V, I_C = 10mA	–	0.75	–	V
Knee Voltage	V_{CEK}	I_C = 20mA, Note 2	–	0.8	–	V
Transition Frequency	f_T	V_{CE} = 15V, I_C = 10mA	1.4	2.3	–	GHz
Maximum Oscillation Frequency	f	V_{CE} = 15V, I_C = 10mA	–	6.5	–	GHz
Output Capacitance	C_{22b}	V_{CB} = 15V, I_E = 0, f = 1MHz	–	1.1	–	pF

Note 1. Pulsed.

Note 2. V_{CEK} tested with I_C = 100ma and I_B = values for which I_C = 110mA at V_{CE} = 1V.

Electrical Characteristics (Cont'd): $(T_A = +25°C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Gain		$V_{CE} = 15V$, $I_C = 10mA$, $f = 800MHz$	–	10	–	dB
Wide Band Power Gain	G_P	$f = 40$ to $860MHz$, $R_S = R_L = 75\Omega$	–	16	–	dB
Noise Figure	NF	$V_{CE} = 15V$, $I_C = 3mA$, $f = 200MHz$	–	2.5	–	dB
		$V_{CE} = 15V$, $I_C = 10mA$, $f = 800MHz$	–	3.5	–	dB
		$V_{CE} = 15V$, $I_C = 10mA$, $f = 200MHz$	–	3.0	–	dB
		$V_{CE} = 15V$, $I_C = 10mA$, $f = 800MHz$	–	4.0	–	dB

.220 (5.58) Dia Max

.185 (4.7) Dia Max

.190 (4.82)

.030 (.762) Max

.500 (12.7) Min

.018 (0.45)

E

B

C

45°

Case

.040 (1.02)