



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE161 Silicon NPN Transistor VHF-UHF Amplifier, Mixer/Osc

Features:

- High Current Gain–Bandwidth Product: $f_T = 600\text{MHz}$ (Min) @ $f = 100\text{MHz}$
- Low Output Capacitance: $C_{ob} = 1.7\text{pF}$ (Max) @ $V_{CB} = 10\text{V}$

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CES}	45V
Collector–Base Voltage, V_{CBO}	45V
Emitter–Base Voltage, V_{EBO}	3V
Continuous Collector Current, I_C	50mA
Total Device Dissipation ($T_A = +25^\circ\text{C}$), P_D	200mW
Derate Above 25°C	1.14mW/ $^\circ\text{C}$
Total Device Dissipation ($T_C = +25^\circ\text{C}$), P_D	300mW
Derate Above 25°C	1.71mW/ $^\circ\text{C}$
Operating Junction Temperature Range, T_J	-65° to $+200^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+200^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1.0\mu\text{A}, I_E = 0$	30	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	3.0	–	–	V
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 3\text{mA}, I_B = 0$	15	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 15\text{V}, I_E = 0$	–	–	0.01	μA
		$V_{CB} = 15\text{V}, I_E = 0, T_A = +150^\circ\text{C}$	–	–	1.0	μA

