



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

## NTE16 (NPN) & NTE17 (PNP) Silicon Complementary Transistors Low Noise, General Purpose Amplifier

### Features:

- Low Collector Saturation Voltage
- Low Output Capacitance
- Low Noise

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

Collector–Base Voltage, $V_{CBO}$ .....	50V
Collector–Emitter Voltage, $V_{CEO}$ .....	40V
Emitter–Base Voltage, $V_{EBO}$ .....	5V
Collector Current, $I_C$ .....	100mA
Collector Dissipation, $P_C$ .....	300mW
Operating Junction Temperature, $T_J$ .....	+125°C
Storage Temperature Range, $T_{stg}$ .....	–55° to +125°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$	40	–	–	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 50\mu\text{A}$	50	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 50\mu\text{A}$	5	–	–	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 30\text{V}$	–	–	0.5	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}$	–	–	0.5	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	270	–	560	
Collector–Emitter Saturation Voltage NTE16	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$	–	–	0.4	V
NTE17			–	0.1	0.5	V
Transition Frequency NTE16	$f_T$	$V_{CE} = 12\text{V}, I_E = 2\text{mA}$	–	180	–	MHz
NTE17			–	140	–	MHz
Output Capacitance NTE16	$C_{ob}$	$V_{CB} = 12\text{V}, I_E = 0, f = 1\text{MHz}$	–	2.0	3.5	pF
NTE17			–	4.0	5.0	pF

