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## NTE128P (NPN) & NTE129P (PNP) Silicon Complementary Transistors General Purpose Amp

### Description:

The NTE128P (NPN) and NTE129P (PNP) are silicon complementary transistors designed for use in general purpose power amplifier and switching applications.

### Features:

- High  $V_{CE}$  Ratings
- Exceptional Power Dissipation Capability

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

Collector–Base Voltage, $V_{CBO}$ .....	100V
Collector–Emitter Voltage, $V_{CEO}$ .....	80V
Emitter–Base Voltage, $V_{EBO}$ .....	5V
Continuous Collector Current, $I_C$ .....	1A
Power Dissipation, $P_{TOT}$	
$T_A = +25^\circ\text{C}$ .....	0.850W
$T_C = +25^\circ\text{C}$ .....	2W
Operating Junction Temperature Range, $T_J$ .....	$-55^\circ$ to $+150^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+150^\circ\text{C}$
Thermal Resistance, Junction–to–Ambient, $R_{thJA}$ .....	147°C/W
Thermal Resistance, Junction–to–Case, $R_{thJC}$ .....	62.5°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 10\text{mA}$ , $I_B = 0$	80	–	–	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 80\text{V}$	–	–	100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}$	–	–	100	nA
DC Current Gain	$h_{FE}$	$I_C = 10\text{mA}$ , $V_{CE} = 2\text{V}$	100	–	–	
		$I_C = 350\text{mA}$ , $V_{CE} = 2\text{V}$	100	–	300	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 350\text{mA}$	–	–	0.35	V
Current Gain Bandwidth Product	$f_T$	$I_C = 50\text{mA}$	50	–	–	
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$	–	–	15	pF

