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## NTE2526 (NPN) & NTE2527 (PNP) Silicon Complementary Transistors High Current Switch TO251

### **Features:**

- Low Collector-Emitter Saturation Voltage
- High Current and High  $f_T$
- Excellent Linearity of  $h_{FE}$
- Fast Switching Time
- TO251 Type Package

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

Collector Base Voltage, $V_{CBO}$	120V
Collector Emitter Voltage, $V_{CEO}$	100V
Emitter Base Voltage, $V_{EBO}$	6V
Collector Current, $I_C$	
Continuous	4A
Pulse	8A
Collector Power Dissipation, $P_C$	
$T_A = +25^\circ\text{C}$	1W
$T_C = +25^\circ\text{C}$	20W
Operating Junction Temperature, $T_J$	+150°C
Storage Temperature Range, $T_{stg}$	-55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$	–	–	1.0	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	–	–	1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 500\text{mA}$	140	–	400	
		$V_{CE} = 5V, I_C = 3A$	40	–	–	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 500\text{mA}$	–	180	–	MHz
NTE2526			–	130	–	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, f = 1\text{MHz}$	–	40	–	pF
NTE2527			–	65	–	pF
NTE2526						

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Saturation Voltage NTE2526	$V_{CE(sat)}$	$I_C = 2A, I_B = 200mA$	–	150	400	mV
NTE2527			–	200	500	mV
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2A, I_B = 200mA$	–	0.9	1.2	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	120	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	100	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6	–	–	V
Turn–On Time	$t_{on}$	$V_{CC} = 50V, V_{BE} = -5V,$ $10I_{B1} = -10I_{B2} = I_C = 2A,$ Pulse Width = $20\mu s,$ Duty Cycle $\leq 1\%$ , Note 1	–	100	–	ns
Storage Time NTE2526	$t_{stg}$		–	900	–	ns
NTE2527			–	800	–	ns
Fall Time	$t_f$			50		ns

Note 1. For NTE2527, the polarity is reversed.

