



**ELECTRONICS, INC.**  
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## NTE227 Silicon NPN Transistor High Voltage Amp, Video Output

**Absolute Maximum Ratings:**

Collector–Base Voltage, $V_{CBO}$ .....	300V
Collector–Emitter Voltage, $V_{CEO}$ .....	300V
Emitter–Base Voltage, $V_{EBO}$ .....	6V
Collector Current, $I_C$ .....	100mA
Power Dissipation ( $T_A = +25^\circ\text{C}$ ), $P_{Dmax}$ .....	850mW
Power Dissipation ( $T_{COLLECTOR LEAD} = +25^\circ\text{C}$ ), $P_{Dmax}$ .....	2W
Maximum Operating Junction Temperature, $T_{jmax}$ .....	+150°C
Thermal Resistance, Junction–to–Case ( $T_{COLLECTOR LEAD} = +25^\circ\text{C}$ ), $R_{thJC}$ .....	62.5°C/W
Thermal Resistance, Junction–to–Ambient ( $T_A = +25^\circ\text{C}$ ), $R_{thJA}$ .....	147°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 260V$	–	–	100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 6V$	–	–	100	nA
DC Current Gain	$h_{FE}$	$I_C = 1mA, V_{CE} = 10V$	25	–	–	
		$I_C = 10mA, V_{CE} = 10V$	40	90	200	
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA$	300	–	–	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu A$	300	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A$	6	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 20mA, I_B = 2mA$	–	0.25	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 20mA, I_B = 2mA$	–	0.74	1.0	V
Transition Frequency	$f_T$	$I_C = 10mA$	50	–	200	MHz
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10mA$	–	–	0.76	V
Capacitance	$C_{ib}$		–	–	70	pF

