



ELECTRONICS, INC.

44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748-5089
<http://www.nteinc.com>

NTE2510 Silicon NPN Transistor High Frequency Video Output

Features:

- High Gain Bandwidth Product: $f_T = 2\text{GHz}$
- High Current Capacity: $I_C = 500\text{mA}$

Applications:

- High-Definition CRT Display Video Output
- Wide-Band Amp

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

Collector-to-Base Voltage, V_{CBO}	30V
Collector-to-Emitter Voltage, V_{CEO}	20V
Emitter-to-Base Voltage, V_{EBO}	3V
Collector Current, I_C	
Continuous	500mA
Peak	1000mA
Collector Dissipation, P_C	
$T_A = +25^\circ\text{C}$	1.3W
$T_C = +25^\circ\text{C}$	5W
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}	$V_{CB} = 20\text{V}, I_E = 0$	-	-	0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 2\text{V}, I_C = 0$	-	-	5.0	μA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 50\text{mA}$	60	-	120	
		$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	20	-	-	
Gain Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 100\text{mA}$	-	2.0	-	GHz

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	–	6.0	–	pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	–	4.6	–	pF
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}$	–	0.3	0.8	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 300\text{mA}, I_B = 30\text{mA}$	–	0.9	1.2	V

