



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



NTE2678 Silicon NPN Transistor Power, High Voltage w/Built-In Damper Diode TO3P(H)IS Type Package

Features:

- Built-In Damper Diode
- High Voltage, High Speed

Applications:

- Color TV Horizontal Output

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

Collector-Base Voltage (Open Emitter), V_{CBO}	1700V
Collector-Emitter Voltage (Open Base), V_{CEO}	600V
Emitter-Base Voltage (Open Collector), V_{EBO}	5V
Collector Current, I_C	
Continuous	6A
Peak	12A
Base Current, I_B	3A
Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C	50W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 200\text{mA}, I_C = 0$	5	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 1\text{A}$	-	-	5.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{A}, I_B = 1\text{A}$	-	-	1.5	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 500\text{V}, I_E = 0$	-	-	10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	66	-	200	mA
DC Current Gain	h_{FE}	$I_C = 1\text{A}, V_{CE} = 5\text{V}$	8	-	28	
Transition Frequency	f_T	$I_C = 100\text{mA}, V_{CE} = 10\text{V}$	1	3	-	MHz
Collector Output Capacitance	C_{OB}	$I_E = 0, V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	250	-	pF
Diode Forward Voltage	V_F	$I_F = 5\text{A}$	-	-	2.0	V
Storage Time	t_s	Resistive Load, $I_{CP} = 5\text{A}, I_{B1} = 1\text{A}, I_{B2} = -2\text{A}, R_L = 40\Omega$	-	-	6.0	μs
Fall Time	t_f		-	-	0.4	μs

