

NTE2642

Silicon NPN Transistor Horizontal Deflection Output High Speed Switch

Features:

- High Breakdown Voltage
- High Reliability
- High Speed Switching
- Wide Area of Safe Operation (ASO)

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

Collector–Base Voltage, V_{CBO}	1700V
Collector–Emitter Voltage, V_{CES}	1700V
Collector–Emitter Voltage, V_{CEO}	600V
Emitter–Base Voltage, V_{EBO}	7V
Collector Current, I_C	
Continuous DC	16A
Pulse	30A
Base Current, I_B	8A
Collector Power Dissipation, P_C	
$T_C = +25^\circ\text{C}$	65W
$T_A = +25^\circ\text{C}$	3.5W
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}	$V_{CB} = 1000\text{V}, I_E = 0$	–	–	50	μA
		$V_{CB} = 1700\text{V}, I_E = 0$	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$	–	–	50	μA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 8\text{A}$	6	–	12	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 8\text{A}, I_B = 2\text{A}$	–	–	3	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 8\text{A}, I_B = 2\text{A}$	–	–	1.5	V
Transition Frequency	f_T	$V_{CE} = 10\text{V}, I_C = 0.1\text{A}, f = 0.5\text{MHz}$	–	3	–	MHz

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Switching Time						
Storage Time	t_{stg}	$I_C = 8\text{A}$, Resistance loaded, $I_{B1} = 2\text{A}$, $I_{B2} = -4\text{A}$	—	—	3.0	μs
Fall Time	t_f		—	—	0.2	μs

