

NTE2680
Silicon NPN Transistor
Power, High Speed Switch w/Internal Damper Diode
TO3P(H)IS Type Package

Features:

- Collector-Emitter Sustaining Voltage: $V_{CEO(SUS)} = 800V$ Min.
- High Switching Speed
- Built-in Damper Diode

Applications:

- Horizontal Deflection Output for Color TV Receiver

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

Collector-Emitter Voltage ($V_{BE} = 0$), V_{CES}	1500V
Collector-Emitter Voltage, V_{CEO}	800V
Emitter-Base Voltage, V_{EBO}	8V
Collector Current, I_C	
Continuous	8A
Peak	15A
Base Current, I_B	
Continuous	4A
Peak	6A
Collector Power Dissipation ($T_C = +25^\circ C$), P_C	45W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-65° to +150°C
Thermal Resistance, Junction-to-Case, R_{thJC}	2.8°C/W

Electrical Characteristics: ($T_C = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C = 100mA$, $I_B = 0$, $L = 25mH$	800	–	–	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 300mA$, $I_C = 0$	8	–	–	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A$, $I_B = 1.25A$	–	–	3.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A$, $I_B = 1.25A$	–	–	1.03	V
Collector Cutoff Current	I_{CES}	$V_{CE} = 1500V$, $V_{BE} = 0$	–	–	1.0	mA
		$T_C = +125^\circ C$	–	–	2.0	mA

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

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}$	$I_C = 500\text{mA}$	7.0	–	–	
			$I_C = 5\text{A}$	4.2	–	–	
Diode Forward Voltage	V_{ECF}	$I_F = 5\text{A}$		–	–	2.2	V
Storage Time	t_{stg}	$I_C = 5\text{A}, I_{B1} = 1\text{A}, I_{B2} = -2.5\text{A}$		–	–	3.75	μs
Fall Time	t_f			–	–	0.4	μs

