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NTE2681

Silicon NPN Transistor

High Speed Switch w/Internal Damper Diode

TO3PMLH Type Package

Features:

- High Switching Speed
- High Breakdown Voltage: $V_{CBO} = 1600V$
- High Reliability
- Built-in Damper Diode

Applications:

- Horizontal Deflection Output for Ultrahigh-Definition CRT Displays

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

Collector-Base Voltage, V_{CBO}	1600V
Collector-Emitter Voltage, V_{CEO}	800V
Emitter-Base Voltage, V_{EBO}	5V
Collector Current, I_C	
Continuous	15A
Peak	35A
Collector Power Dissipation, P_C	3W
Collector Power Dissipation ($T_C = +25^\circ C$), P_C	85W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 800V, I_E = 0$	–	–	10	μA
	I_{CES}	$V_{CE} = 1600V, R_{BE} = 0$	–	–	1.0	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4V, I_C = 0$	40	–	200	mA
DC Current Gain	h_{FE}	$V_{CE} = 5V$ $I_C = 1A$	8	–	–	
		$I_C = 11A$	4	–	–	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10A, I_B = 2.5A$	–	–	3.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 10A, I_B = 2.5A$	–	–	1.5	V

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Diode Forward Voltage	V_F	$I_{EC} = 12\text{A}$	–	–	2.2	V
Storage Time	t_{stg}	$I_C = 7\text{A}, I_{B1} = 900\text{mA},$ $I_{B2} = -3.5\text{A}$	–	–	3.0	μs
Fall Time	t_f		–	–	0.2	μs

