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RoHS 2002/95/EC

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°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°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°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°C	–	–	2.0	mA

Electrical Characteristics (Cont'd): (T_C = +25°C unless otherwise specified)

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