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NTE2332
Darlington Silicon NPN Transistor w/ Internal Damper & Zener Diode

Description:

The NTE2332 Darlington transistor is especially well suited for use in switching of L load motor drivers, printer hammer drivers, relay drivers, etc.

Features:

- High DC Current Gain
- Large Current Capacity and Wide ASO
- Contains 60 ±10V Avalanche Diode Between Collector and Base
- Uniformity in Collector–to–Base Breakdown Voltage Due to Adoption of Accurate Impurity Diffusion Process
- 25mJ Reverse Energy Rating

Absolute Maximum Ratings: (T_A = +25°C, unless otherwise specified)

Collector to Base Voltage, V_{CBO}, ... 60 ±10V
Collector to Emitter Voltage, V_{CEO}, ... 60 ±10V
Emitter to Base Voltage, V_{EBO} 6V
Collector Current, I_C 2A
Peak Collector Current, i_{cp} 4A
Base Current, I_B 0.4A
Collector Dissipation (T_C = +25°C), P_C 20W
Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CEO}	V_{CB} = 40V, I_E = 0	–	–	10	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0	–	–	2	mA

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 1A	1000	4000	–	
Gain Bandwidth Product	f_T	V_{CE} = 5V, I_C = 1A	–	180	–	MH_Z
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 1A, I_B = 4mA	–	1.0	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 1A, I_B = 4mA	–	–	2.0	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_E = 0	50	60	70	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	50	60	70	V
Unclamped Inductive Load Energy	$E_{s/b}$	L = 100mH, R_{BE} = 100Ω	25	–	–	mJ
Turn–On Time	t_{on}	V_{CC} = 20V, I_C = 1A	–	0.2	–	µs
Storage Time	t_{stg}	I_{B1} = $-I_{B2}$ = 4mA	–	3.5	–	µs
Fall Time	t_f	I_{B1} = $-I_{B2}$ = 4mA	–	0.5	–	µs