ELECTRONICS, INC.
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NTE2338
Silicon NPN Transistor
Darlington Power Amp w/Internal Damper & Zener Diode

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

Collector–Emitter Voltage, V_{CEO} . . . . . 60 ±10V
Emitter–Base Voltage, V_{EBO} 7V
Collector Current, I_C
  Continuous 1.5A
  Peak 3.0A
Collector Dissipation (T_C = +25°C), P_C 10W
Operating 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–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_E = 0	50	60	70	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 50mA, I_C = 0	7	–	–	V
Collector Cutoff Current	I_{CEO}	V_{CE} = 50V, R_{BE} = ∞	–	–	10	μA
DC Current Gain	h_{FE}	V_{CE} = 3V, I_C = 1A	2000	–	30000	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 1A, I_B = 1mA	–	–	1.5	V
		I_C = 1.5A, I_B = 1.5mA	–	–	2.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 1A, I_B = 1mA	–	–	2.0	V
		I_C = 1.5A, I_B = 1.5mA	–	–	2.5	V
Turn–On Time	t_{on}	I_C = 1A, I_{B1} = $-I_{B2}$ = 1mA	–	0.5	–	μs
Turn–Off Time	t_{off}		–	2.0	–	μs

Schematic Diagram