ELECTRONICS, INC.
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NTE267
Silicon NPN Transistor
High Gain Darlington Power Amp, Switch

Features:
- Forward Current Transfer Ratio: h_{FE} = 90,000 min.
- Free−Air Power Dissipation: 1.33W @ T_A = +50°C
- Hard Solder Mountdown

Applications:
- Driver
- Regulator
- Audio Output
- Relay Substitute
- Touch Switch
- Oscillator
- IC Driver
- Servo Amplifier
- Capacitor Multiplier

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

Collector to Emitter, V_{CEO} 30V
Emitter to Base, V_{EBO} 13V
Collector to Emitter, V_{CES} 30V
Collector Current, I_C
  Continuous 500mA
  Peak 1A
Power Dissipation, P_T
  Tab at +25°C 6.25W
  Free Air at +50°C ^{w}/Tab 1.33W
Thermal Resistance, Junction to Case (Note 1), R_{thJC} . . . . . 20°C/W
Thermal Resistance, Junction to Ambient (Note 1), R_{thJA} . . . . . 75°C/W
Operating Junction Temperature Range, T_J . . . . . −55° to +150°C
Storage Temperature Range, T_{stg} . . . . . −55° to +150°C
Lead Temperature (During Soldering, 1/16” ±1/32” from case, 10sec max), T_L . . . . . +260°C

Note 1. Tab temperature is measured on center of tab, 1/16” from plastic body.

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

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Forward Current Transfer Ratio	h_{FE}	V_{CE} = 5V, f = 1kHz	I_C = 200mA	90k	–	–	
			I_C = 20mA	90k	–	–	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 0.5mA, Note 2		–	–	1.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 500mA, I_B = 0.5mA		–	–	2.0	V
Collector Cutoff Current	I_{CES}	V_{CE} = Rated V_{CES}, T_J = +25°C		–	–	0.5	µA
	I_{CBO}	V_{CE} = Rated V_{CES}, T_J = +150°C		–	–	20	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 13V		–	–	0.1	µA
Collector Capacitance	C_{cbo}	V_{CB} = 10V, f = 1MHz		–	5	10	pF
Gain Bandwidth Product	f_T	V_{CE} = 5V, I_C = 20mA		–	75	–	MHz
Switching Times							
Delay Time and Rise Time	t_d & t_r	I_C = 1A, I_{B1} = 1mA		–	100	–	ns
Storage Time	t_s	I_C = 1A, I_{B1} = I_{B2} = 1mA		–	350	–	ns
Fall Time	t_f	I_C = 1A, I_{B1} = I_{B2} = 1mA		–	800	–	ns

Note 2. Pulsed measurement, 300µsec pulse width, duty cycle ≤ 2%.