



NES

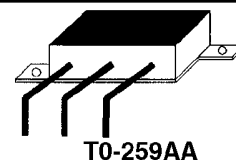
NEW ENGLAND SEMICONDUCTOR

NES6287Z

PNP SILICON DARLINGTON POWER TRANSISTOR

**20 AMPERE
PNP DARLINGTON
POWER TRANSISTOR**

- General Purpose Amplifier
- Low Frequency Switching
- High DC Current Gain
- Monolithic Construction
- Built in Base Emitter Shunt Resistors

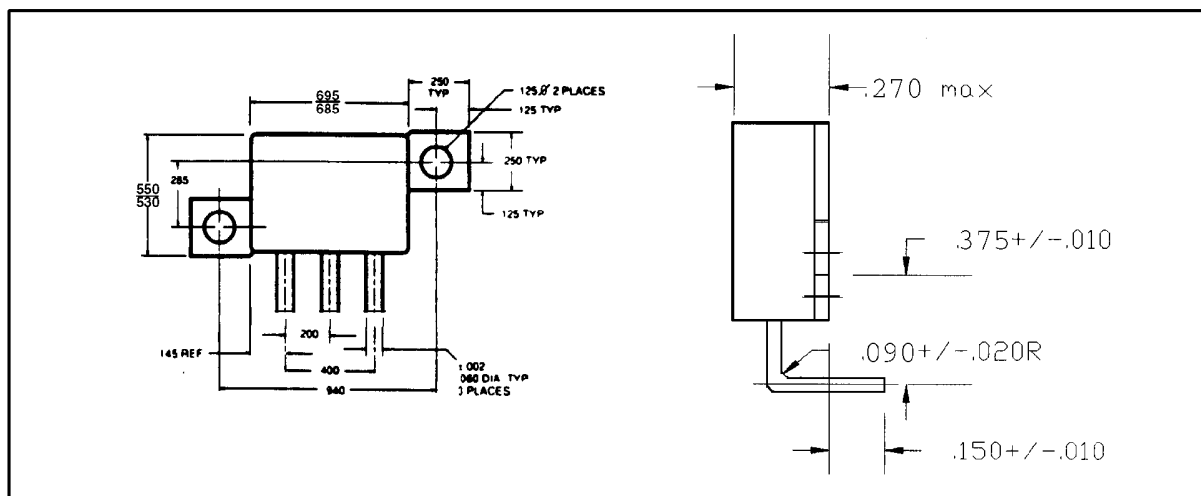


MAXIMUM RATINGS

Rating	Symbol	NES6287Z	Unit
Collector-Emitter Voltage	V_{CEO}	100	Vdc
Collector-Base	V_{CB}	100	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Collector Current -- Continuous	I_C	20	Adc
Peak (1)		40	
Base Current -- Continuous	I_B	0.5	Adc
Total Power Dissipation @ $T_C = 25^\circ C$	P_D	125	Watts
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ C$

(1) Pulse Test: Pulse Width = 10ms, Duty Cycle $\leq 10\%$.

MECHANICAL OUTLINE



NEW ENGLAND SEMICONDUCTOR

6 Lake Street Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

T4-4.8-860-034 REV:--

**NES****NEW ENGLAND SEMICONDUCTOR****NES6287Z****ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)**

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage $I_C = 0.1 \text{ A dc}, I_B = 0$	$V_{CEO(SUS)}$	100		Vdc
Collector Cutoff Current $V_{CE} = 50 \text{ Vdc}, I_B = 0$ $V_{CE} = \text{Rated } V_{CB}, V_{BE} \text{ off} = 1.5 \text{ Vdc}$	I_{CEO} I_{CEX}		1.0 0.5	mAdc mAdc
Emitter Cutoff Current $V_{BE} = 5.0 \text{ Vdc}, I_C = 0$	I_{EBO}		2.0	mAdc
ON CHARACTERISTICS (1)				
DC Current Gain $I_C = 10 \text{ A dc}, V_{CE} = 3.0 \text{ Vdc}$ $I_C = 20 \text{ A dc}, V_{CE} = 3.0 \text{ Vdc}$	h_{FE}	750 100	18,000	
Collector-Emitter Saturation Voltage $I_C = 10 \text{ A dc}, I_B = 40 \text{ mAdc}$ $I_C = 20 \text{ A dc}, I_B = 200 \text{ mAdc}$	$V_{CE(sat)}$		2.0 3.0	Vdc
Base-Emitter Saturation Voltage $I_C = 20 \text{ A dc}, I_B = 200 \text{ mAdc}$	$V_{BE(sat)}$		4.0	Vdc
DYNAMIC CHARACTERISTICS				
Forward Current Transfer Ratio $I_C = 10 \text{ A dc}, V_{CE} = 3.0 \text{ Vdc}, f = 1.0 \text{ Mhz}$	$ h_{fe} $	4.0		Mhz
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 0.1 \text{ Mhz}$	C_{Ob}		600	pf

(1)Pulse Test: Pulse Width = 300 μ s, Duty Cycle $\leq$ 2.0%.**Reliability Testing Available on Request****SX LEVEL RELIABILITY TESTING**

100% SCREENING	GROUP A	GROUP B (Sample)	GROUP C (Sample)
Internal Visual Temp Cycle Thermal Response Constant Acceleration PIND Fine and Gross Leak HTRB Power Burn In	Visual and Mechanical Dc Static Tests 25 $^\circ$ C DC Static Tests High Temp DC Static Tests Low Temp Dynamic Tests @ 25 $^\circ$ C	Solderability Temp Cycle Fine and Gross Leak Bond Strength Intermittent Op Life Steady State Op Life Thermal Resistance Hi-Temp Life (non operating)	Physical Dimensions Thermal Shock Terminal Strength Hermetic Seal Moisture Resistance Shock Test Vibration Test Constant Acceleration Salt Atmosphere Operation Life

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