New Jersey Semi-Conductor Products, Inc.

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2N1618
HIGH POWER NPN SILICON TRANSISTOR

ABSOLUTE MAXIMUM RATINGS

VOLTAGE		
Collector to Emitter Voltage, V_{CE}	100	Volts
Collector to Base Voltage, V_{CBO}	80	Volts
Emitter to Base Voltage, V_{EBO}	8	Volts
	10	Volts
CURRENT		
Collector Current, I_C	5	Amps
Base Current, I_B	2.0	Amps
POWER		
Collector Dissipation, T_C=25°C, P_C	60	Watts
Collector Dissipation, T_C=100°C, P_C	30	Watts
Thermal Resistance, Junction to Case θ_{J-C}	2.5	°C/W
TEMPERATURE		
Junction Temperature Range, T_J (Operating and Storage)	−65 to +175°C −65 to +200°C	

ELECTRICAL CHARACTERISTICS
(25°C Case Temperature Except Where Otherwise Noted)

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	Min.	Max.	UNITS
Breakdown Voltage, Collector to Emitter	BV_{CEO}	*I_C=100mA, I_B=0	80		Volts
Collector Cutoff Current	I_{CEX}	V_{CE}=60V, V_{BE}=−1.0V			µA
		V_{CE}=80V, V_{BE}=−1.0V			µA
		V_{CE}=100V, V_{BE}=−1.0V		1000	µA
Collector Cutoff Current	I_{CBO}	V_{CB}=Rated T_C=150°C		10	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=8V		1000	µA
		V_{EB}=10V			µA
D.C. Current Gain	h_{FE}	*I_C=2A, V_{CE}=12V	15	75	
		*I_C=2A, V_{CE}=4V			
		*I_C=5A, V_{CE}=4V			
Collector to Emitter Saturation Voltage	V_{CE}(sat)	*I_C=2A, I_B=250mA		2.0	Volts
		*I_C=2A, I_B=200mA			Volts
Base to Emitter Saturation Voltage	V_{BE}(sat)	*I_C=2A, I_B=250mA		3.0	Volts
		*I_C=2A, I_B=200mA			Volts
Turn-On Time	T_{ON}	**I_C=2A, I_{B1}=200mA		3.0 typ.	µSec
Turn-Off Time	T_{OFF}	**I_C=2A, I_{B2}=−200mA		6.0 typ.	µSec

*Pulse width ≤ 300 µsec. Duty cycle ≤ 2%.

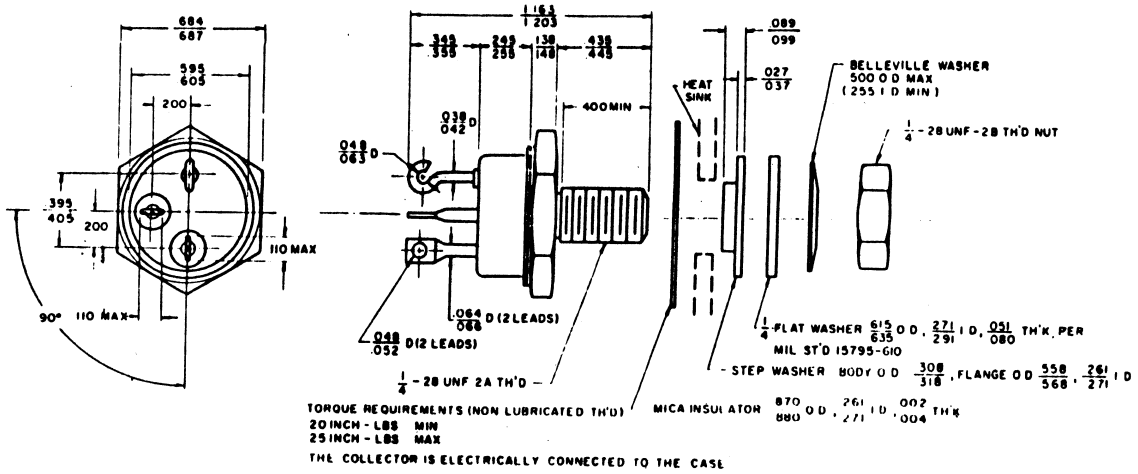
Quality Semi-Conductors

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DIMENSIONAL OUTLINE 1 1/16"



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