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2N1618
HIGH POWER NPN SILICON TRANSISTOR

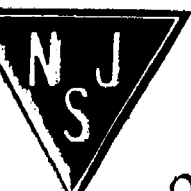
ABSOLUTE MAXIMUM RATINGS

VOLTAGE Collector to Emitter Voltage, V_{ce} Collector to Base Voltage, V_{cbo}	100 80	Volts Volts
Emitter to Base Voltage, V_{ebo}	8 10	Volts Volts
CURRENT Collector Current, I_c	5	Amps
Base Current, I_b	2.0	Amps
POWER Collector Dissipation, $T_c=25^\circ\text{C}$, P_c Collector Dissipation, $T_c=100^\circ\text{C}$, P_c Thermal Resistance, Junction to Case θ_{j-c}	60 30 2.5	Watts Watts °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_{cbo}	* $I_c=100\text{mA}$, $I_b=0$	80		Volts
Collector Cutoff Current	I_{cex}	$V_{ce}=60\text{V}$, $V_{be}=-1.0\text{V}$ $V_{ce}=80\text{V}$, $V_{be}=-1.0\text{V}$ $V_{ce}=100\text{V}$, $V_{be}=-1.0\text{V}$		1000	μA μA μA
Collector Cutoff Current	I_{cbo}	$V_{ce}=\text{Rated}$ $T_c=150^\circ\text{C}$		10	mA
Emitter Cutoff Current	I_{ebo}	$V_{be}=8\text{V}$ $V_{be}=10\text{V}$		1000	μA μA
D.C. Current Gain	h_{FE}	* $I_c=2\text{A}$, $V_{ce}=12\text{V}$ * $I_c=2\text{A}$, $V_{ce}=4\text{V}$ * $I_c=5\text{A}$, $V_{ce}=4\text{V}$	15	75	
Collector to Emitter Saturation Voltage	$V_{ce}(\text{sat})$	* $I_c=2\text{A}$, $I_b=250\text{mA}$ * $I_c=2\text{A}$, $I_b=200\text{mA}$		2.0	Volts Volts
Base to Emitter Saturation Voltage	$V_{be}(\text{sat})$	* $I_c=2\text{A}$, $I_b=250\text{mA}$ * $I_c=2\text{A}$, $I_b=200\text{mA}$		3.0	Volts Volts
Turn-On Time	T_{ON}	* $I_c=2\text{A}$, $I_{b1}=200\text{mA}$		3.0 typ.	μSec
Turn-Off Time	T_{OFF}	* $I_c=2\text{A}$, $I_{b1}=-200\text{mA}$		6.0 typ.	μSec

* Pulse width $\leq 300 \mu\text{sec}$. Duty cycle $\leq 2\%$.



NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors