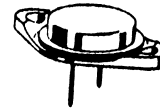


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2N6029
2N6030
2N6031



16 AMPERE
POWER TRANSISTORS
PNP SILICON

100-120-140 VOLTS
200 WATTS

*MAXIMUM RATINGS

Rating	Symbol	2N6029	2N6030	2N6031	Unit
Collector-Emitter Voltage	V_{CE}	100	120	140	Vdc
Collector Base Voltage	V_{CB}	100	120	140	Vdc
Emitter Base Voltage	V_{EB}	7.0			Vdc
Collector Current - Continuous	I_C	16			Adc
Peak		20			
Base Current - Continuous	I_B	5.0			Adc
Total Device Dissipation @ $T_C = 25^\circ\text{C}$	P_D	200			Watts
Derate above 25°C		1.14			W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200			$^\circ\text{C}$

*THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	0.875	$^\circ\text{C/W}$

*ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage (1) ($I_C = 200 \text{ mAdc}, I_B = 0$)	2N6029 2N6030 2N6031	$V_{CE(sus)}$	100 120 140	Vdc
Collector-Emitter Cutoff Current ($V_{CE} = 50 \text{ Vdc}, I_B = 0$) ($V_{CE} = 60 \text{ Vdc}, I_B = 0$) ($V_{CE} = 70 \text{ Vdc}, I_B = 0$)	2N6029 2N6030 2N6031	I_{CEO}	2.0 2.0 2.0	mAdc
Collector-Emitter Cutoff Current ($V_{CE} = \text{Rated } V_{CB}, V_{BE(off)} = 1.5 \text{ Vdc}$) ($V_{CE} = \text{Rated } V_{CB}, V_{BE(off)} = 1.5 \text{ Vdc}, T_C = 150^\circ\text{C}$)		I_{CEX}	2.0 7.0	mAdc
Collector-Base Cutoff Current ($V_{CB} = \text{Rated } V_{CB}, I_E = 0$)		I_{CBO}	2.0	mAdc
Emitter-Base Cutoff Current ($V_{BE} = 7.0 \text{ Vdc}, I_C = 0$)		I_{EBO}	5.0	mAdc

ON CHARACTERISTICS (1)

DC Current Gain ($I_C = 8.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$) ($I_C = 16 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)	2N6029 2N6030 2N6031 All Types	h_{FE}	25 20 15 4.0	100 80 60	
Collector-Emitter Saturation Voltage ($I_C = 10 \text{ Adc}, I_B = 1.0 \text{ Adc}$) ($I_C = 16 \text{ Adc}, I_B = 4.0 \text{ Adc}$)		$V_{CE(sat)}$		1.0 2.0	Vdc
Base-Emitter Saturation Voltage ($I_C = 10 \text{ Adc}, I_B = 1.0 \text{ Adc}$)		$V_{BE(sat)}$		1.8	Vdc
Base-Emitter On Voltage ($I_C = 8.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)		$V_{BE(on)}$		1.5	Vdc

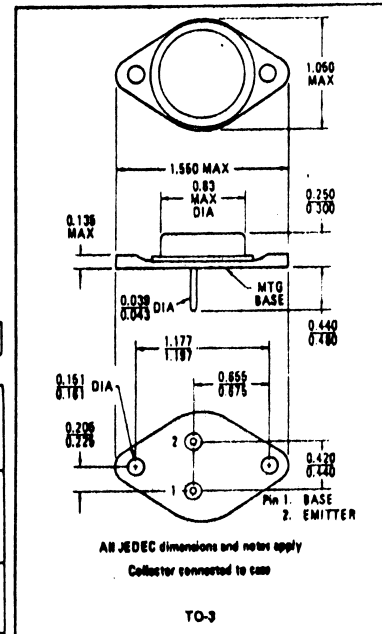
DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product (2) ($I_C = 1.0 \text{ Adc}, V_{CE} = 20 \text{ Vdc}, f_{test} = 0.5 \text{ MHz}$)		f_T	1.0		MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 0.1 \text{ MHz}$)		C_{ob}		1000	pF
Small-Signal Current Gain ($I_C = 4.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$)		h_{fe}	15		

*Indicates JEDEC Registered Data

(1) Pulse Test. Pulse Width $\leq 300 \mu\text{s}$. Duty Cycle $\leq 2.0\%$.

(2) $f_T = |h_{fe}| \cdot f_{test}$



Quality Semi-Conductors