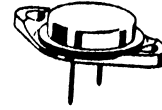


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2N6029  
 2N6030  
 2N6031



16 AMPERE  
 POWER TRANSISTORS  
 PNP SILICON

100-120-140 VOLTS  
 200 WATTS

\*MAXIMUM RATINGS

Rating	Symbol	2N6029	2N6030	2N6031	Unit
Collector-Emitter Voltage	V <sub>CEO</sub>	100	120	140	Vdc
Collector Base Voltage	V <sub>CB</sub>	100	120	140	Vdc
Emitter Base Voltage	V <sub>EB</sub>	← 7.0 →			Vdc
Collector Current - Continuous	I <sub>C</sub>	← 16 →			Adc
Peak		← 20 →			
Base Current - Continuous	I <sub>B</sub>	← 5.0 →			Adc
Total Device Dissipation @ T <sub>C</sub> = 25°C	P <sub>D</sub>	← 200 →			Watts
Derate above 25°C		← 1.14 →			W/°C
Operating and Storage Junction Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	← -65 to +200 →			°C

\*THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ <sub>JC</sub>	0.875	°C/W

\*ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage (1) (I <sub>C</sub> = 200 mA, I <sub>B</sub> = 0)	2N6029 2N6030 2N6031	V <sub>CEO(sus)</sub>	100 120 140	Vdc
Collector-Emitter Cutoff Current (V <sub>CE</sub> = 50 Vdc, I <sub>B</sub> = 0) (V <sub>CE</sub> = 60 Vdc, I <sub>B</sub> = 0) (V <sub>CE</sub> = 70 Vdc, I <sub>B</sub> = 0)	2N6029 2N6030 2N6031	I <sub>CEO</sub>	2.0 2.0 2.0	mA
Collector-Emitter Cutoff Current (V <sub>CE</sub> = Rated V <sub>CB</sub> , V <sub>BE(off)</sub> = 1.5 Vdc) (V <sub>CE</sub> = Rated V <sub>CB</sub> , V <sub>BE(off)</sub> = 1.5 Vdc, T <sub>C</sub> = 150°C)		I <sub>CEx</sub>	2.0 7.0	mA
Collector-Base Cutoff Current (V <sub>CB</sub> = Rated V <sub>CB</sub> , I <sub>E</sub> = 0)		I <sub>CBO</sub>	2.0	mA
Emitter-Base Cutoff Current (V <sub>BE</sub> = 7.0 Vdc, I <sub>C</sub> = 0)		I <sub>EBO</sub>	5.0	mA

ON CHARACTERISTICS (1)

DC Current Gain (I <sub>C</sub> = 8.0 Adc, V <sub>CE</sub> = 2.0 Vdc)	2N6029 2N6030 2N6031 All Types	h <sub>FE</sub>	25 20 15 4.0	
Collector-Emitter Saturation Voltage (I <sub>C</sub> = 10 Adc, I <sub>B</sub> = 1.0 Adc) (I <sub>C</sub> = 16 Adc, I <sub>B</sub> = 4.0 Adc)		V <sub>CE(sat)</sub>	1.0 2.0	Vdc
Base-Emitter Saturation Voltage (I <sub>C</sub> = 10 Adc, I <sub>B</sub> = 1.0 Adc)		V <sub>BE(sat)</sub>	1.8	Vdc
Base-Emitter On Voltage (I <sub>C</sub> = 8.0 Adc, V <sub>CE</sub> = 2.0 Vdc)		V <sub>BE(on)</sub>	1.5	Vdc

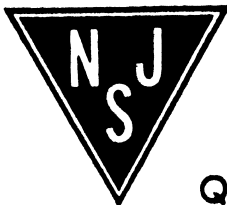
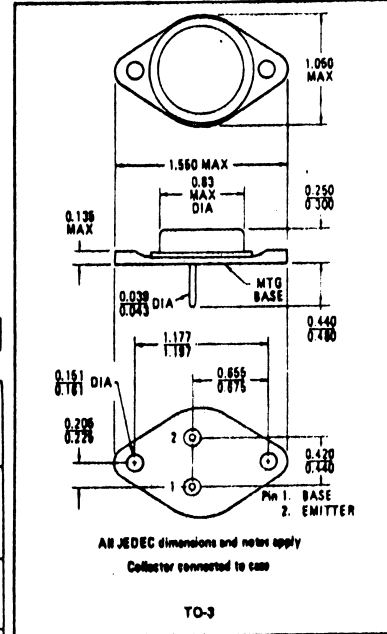
DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product (2) (I <sub>C</sub> = 1.0 Adc, V <sub>CE</sub> = 20 Vdc, f <sub>test</sub> = 0.5 MHz)		f <sub>T</sub>	1.0	MHz
Output Capacitance (V <sub>CB</sub> = 10 Vdc, I <sub>E</sub> = 0, f = 0.1 MHz)		C <sub>ob</sub>	1000	pF
Small-Signal Current Gain (I <sub>C</sub> = 4.0 Adc, V <sub>CE</sub> = 10 Vdc, f = 1.0 kHz)		h <sub>fe</sub>	15	

<sup>1</sup>Indicates JEDEC Registered Data

(1) Pulse Test Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

(2) f<sub>T</sub> = |h<sub>fe</sub>| • f<sub>test</sub>



Quality Semi-Conductors