New Jersey Semi-Conductor Products, Inc.

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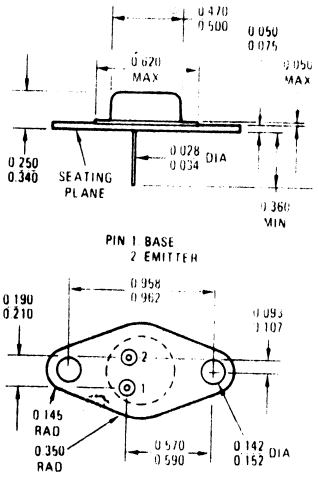
2N6049

4 AMPERE
POWER TRANSISTOR
PNP SILICON
55 VOLTS
75 WATTS

MEDIUM-POWER PNP SILICON TRANSISTOR

. . . designed for general-purpose switching and amplifier applications

- Aluminum TO-66 Package for Better Power Handling Capability – 75 Watts @ $T_C = 25^oC$
- Excellent Safe Operating Area
- DC Current Gain Specified to 4.0 Amperes
- Complement to NPN Type 2N3054A



All JEDEC dimensions and notes apply

Collector connected to case

TO-66

***MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	55	Vdc
Collector-Emitter Voltage (R_{BE} = 100 Ω)	V_{CER}	60	Vdc
Collector-Base Voltage	V_{CB}	90	Vdc
Emitter-Base Voltage	V_{EB}	7.0	Vdc
Collector Current — Continuous Peak	I_C	4.0 10	Adc
Base Current	I_B	2.0	Adc
Total Device Dissipation @ $T_C = 25^oC$ Derate above 25°	P_D	75 0.43	Watts W/°C
Operating and Storage Junction, Temperature Range	T_J, T_{stg}	-65 to +200	°C

*Indicates JEDEC Registered Data

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	2.33	°C/W

ELECTRICAL CHARACTERISTICS ($T_C = 25^oC$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage (1) (I_C = 100 mAdc, I_B = 0)	$V_{CEO(sus)}$	55	–	Vdc
Collector-Emitter Sustaining Voltage (1) (I_C = 100 mAdc, R_{BE} = 100 Ω	$V_{CER(sus)}$	60	–	Vdc
Collector Cuttoff Current (V_{CE} = 30 Vdc, I_B = 0)	I_{CEO}	–	500	μAdc
Collector Cutoff Current (V_{CE} = 90 Vdc, $V_{BE(off)}$ = 1.5 Vdc) (V_{CE} = 90 Vdc, $V_{BE(off)}$ = 1.5 Vdc, T_C = 150°C)	I_{CEX}	– –	1.0 6.0	mAdc
Emitter Cutoff Current (V_{BE} = 7.0 Vdc, I_C = 0)	I_{EBO}	–	1.0	mAdc
ON CHARACTERISTICS (1)				
DC Current Gain (I_C = 500 mAdc, V_{CE} = 4.0 Vdc) (I_C = 3.0 Adc, V_{CE} = 4.0 Vdc)	h_{FE}	25 6.0	100	– –
Collector-Emitter Saturation Voltage (I_C = 500 mAdc, I_B = 50 mAdc) (I_C = 4.0 Adc, I_B = 800 mAdc)	$V_{CE(sat)}$	– –	0.5 2.0	Vdc
Base-Emitter On Voltage (I_C = 500 mAdc, V_{CE} = 4.0 Vdc)	$V_{BE(on)}$	–	1.0	Vdc
DYNAMIC CHARACTERISTICS				
Current Gain – Bandwidth Product (I_C = 200 mAdc, V_{CE} = 10 Vdc)	f_T	3.0	–	MHz
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 0.1 MHz)	C_{ob}	–	200	pF
Small-Signal Current Gain (I_C = 100 mAdc, V_{CE} = 4.0 Vdc, f = 1.0 kHz)	h_{fe}	25	180	

Quality Semi-Conductors