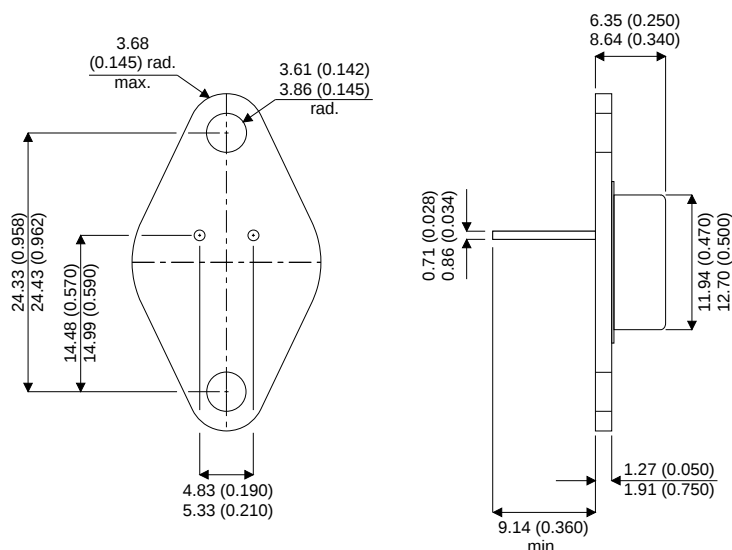


MECHANICAL DATA

Dimensions in mm (inches)



TO-66

PIN 1 — Base
PIN 2 — Emitter
Case is Collector.

MEDIUM POWER SILICON NPN TRANSISTOR

FEATURES

- Low Saturation Voltages
- High Voltage Ratings
- Maximum Safe-Operating-Area Curves for DC and Pulse Operation.

APPLICATIONS

- Series and Shunt Regulators
- Audio Amplifiers
- Power Switching Circuits
- Solenoid and Relay Drivers

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector – Base Voltage	160V
V_{CEO}	Collector – Emitter Voltage	140V
V_{EBO}	Emitter – Base Voltage	7V
I_C	Collector Current	3A
I_B	Base Current	2A
P_{tot}	Total Power Dissipation	25W
	Derate above $25^{\circ}C$	0.142 W / $^{\circ}C$
T_j, T_{stg}	Operating and Storage Junction Temperature Range	-65 to $200^{\circ}C$

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
V _{CEO(sus)*}	Collector – Emitter Sustaining Voltage I _C = 0.1A I _B = 0	140			V
I _{CEO}	Collector Cut-off Current V _{CE} = 140V I _B = 0			100	mA
I _{CEX}	Collector Cut-off Current V _{CE} = 140V V _{BE(off)} = 1.5V T _C = 150°C			5 6	mA
I _{EBO}	Emitter Cut-off Current V _{EB} = 7V I _C = 0			1	mA
ON CHARACTERISTICS					
h _{FE}	DC Current Gain V _{CE} = 4V I _C = 0.5A	25		100	—
	V _{CE} = 4V I _C = 2.7A	5			
V _{CE(sat)}	Collector – Emitter Saturation Voltage I _C = 2.7A I _B = 0.9A			6	V
V _{BE(on)}	Base – Emitter On Voltage V _{CE} = 4V I _C = 2.7A			6.7	V
DYNAMIC CHARACTERISTICS					
h _{fe}	Small Signal Current Gain V _{CE} = 4V I _C = 0.5A f = 1kHz	15		75	—
h _{fe}	Small Signal Current Gain V _{CE} = 4V I _C = 0.5A f = 0.4MHz	5			—

* This test must NOT be measured on a curve tracer.

THERMAL CHARACTERISTICS

R _{θJC}	Thermal Resistance Junction – Case			7	°C/W
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