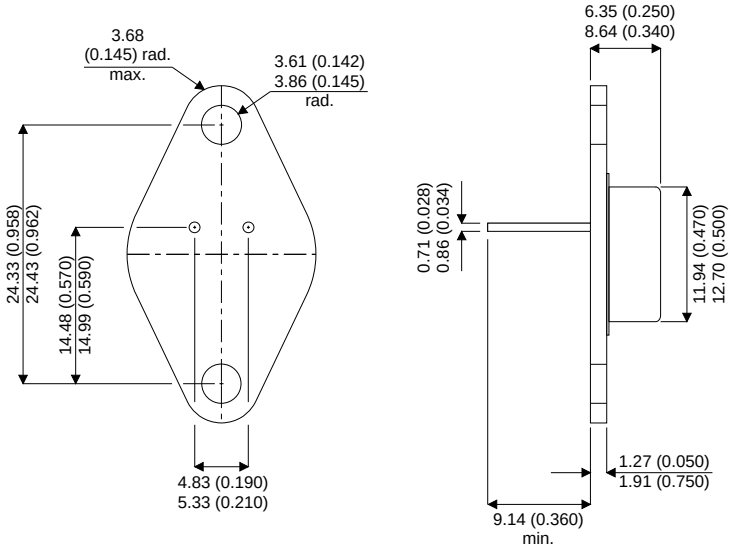
SEME LAB

2N3441

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°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°C	0.142 W /°C
T_j , T_{stg}	Operating and Storage Junction Temperature Range	–65 to 200°C

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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			5	mA
			T_C = 150°C			6	
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 f = 1kHz	I_C = 0.5A	15		75	—
$\lvert h_{fe} \rvert$	Small Signal Current Gain	V_{CE} = 4V f = 0.4MHz	I_C = 0.5A	5			—

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

THERMAL CHARACTERISTICS

$R_{\theta JC}$	Thermal Resistance Junction – Case				7	°C/W