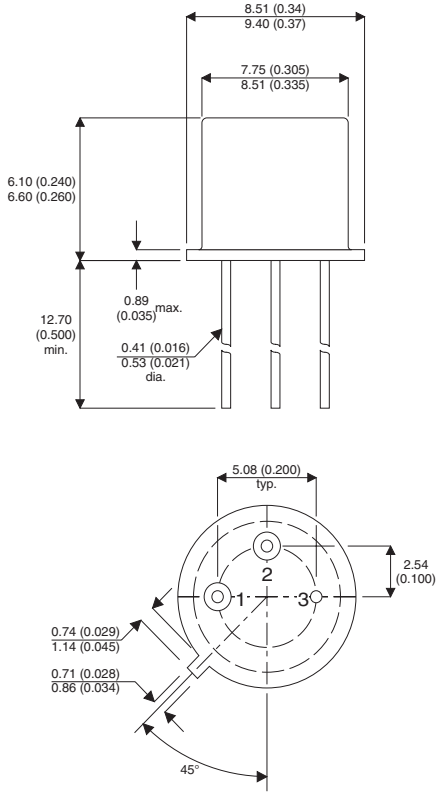
SEME LAB

ZT91

MECHANICAL DATA

Dimensions in mm (inches)



TO39 PACKAGE (TO-205AD)

Underside View

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

MEDIUM POWER SILICON NPN PLANAR TRANSISTOR

General purpose NPN Transistor in a hermetic TO39 package.

V_{CEO} = 100V

I_C = 1A

P_{TOT} = 5W

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage	120V
V_{CEO}	Collector – Emitter Voltage	100V
V_{EBO}	Emitter – Base Voltage	6V
V_{CER}	Collector – Emitter Sustaining Voltage	100V
I_C	Collector Current	1A
P_{TOT}	Dissipation @ T_{amb} = 25°C	1W
	@ Case Temp. = 100°C	2.9W
	@ Case Temp. = 25°C	5W
	Derating linearly	175°C/W
T_{stg}, T_j	Storage and Operatuing Junction Temperature	–65 to 175°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{CEO(SUS)}$	Collector – Emitter Sustaining Voltage	I_C = 10mA	I_B = 0	100			V
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 200mA	I_B = 20mA			1.2	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 200mA	I_B = 20mA			1.5	
I_{CBO}	Collector Cut-off Current	V_{CB}=V_{CE}	I_E = 0			1	mA
			T_{amb} = 100°C			60	
I_{EBO}	Emitter - Base Reverse Current	V_{EB} = 5V	I_C = 0			0.1	µA
h_{FE}	DC Current Gain	V_{CE} = 10V	I_C = 10mA	30			—
		V_{CE} = 10V	I_C = 200mA	40		120	
fT	Gain Bandwidth Product	V_{CE} = 10V	I_C = 50mA f = 10MHz	60	250		MHz
NF	Noise Figure	V_{CE} = 10V	I_C = 300µA f = 1KHz		6		dB
C_{ob}	Output Capacitance	V_{CB} = 10V	f = 0			25	pF
C_{ib}	Input Capacitance	V_{EB} = 1V	f = 0			100	

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