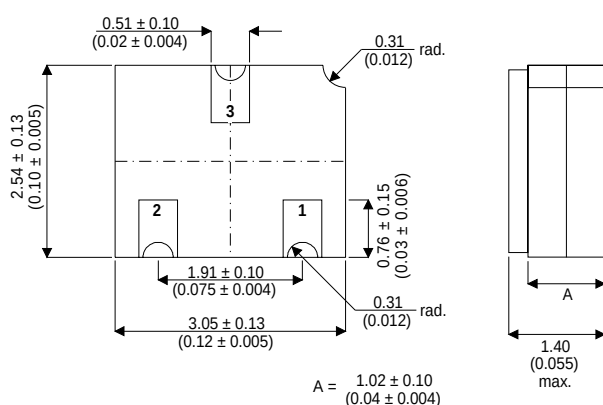


MECHANICAL DATA

Dimensions in mm (inches)



SOT23 CERAMIC (LCC1 PACKAGE)

Underside View

PAD 1 – Base PAD 2 – Emitter PAD 3 – Collector

GENERAL PURPOSE NPN TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE

FEATURES

- GENERAL PURPOSE NPN TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- CECC SCREENING OPTIONS

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

V_{CBO}	Collector – Base Voltage	300V
V_{CEO}	Collector – Emitter Voltage	300V
V_{EBO}	Emitter – Base Voltage	6V
I_C	Continuous Collector Current	500mA
P_{tot}	Power Dissipation @ $T_{amb} = 25^{\circ}\text{C}$	680mW
	@ $T_{case} = 25^{\circ}\text{C}$	1.8W
T_j, T_{stg}	Operating and Storage Temperature	-55 to 175°C

THERMAL CHARACTERISTICS

Parameter	Max.	Unit
$R_{th(j-amb)}$ Thermal Resistance Junction to Ambient	350	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$ Collector – Base Breakdown Voltage	$I_C = 100\mu\text{A}$ $I_E = 0$	300			V
$V_{(BR)CEO}$ Collector - Emitter Breakdown Voltage	$I_C = 1\text{mA}$ $I_B = 0^*$	300			V
$V_{(BR)EBO}$ Emitter – Base Breakdown Voltage	$I_E = 100\mu\text{A}$ $I_C = 0$	6			V
I_{CBO} Collector Cut-off Current	$V_{CB} = 200\text{V}$ $I_E = 0$			0.1	μA
I_{EBO} Emitter Cut-off Current	$V_{EB} = 6\text{V}$ $I_C = 0$			0.1	μA
	$V_{EB} = 4\text{V}$ $I_C = 0$			—	
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = 20\text{mA}$ $I_B = 2\text{mA}$			0.5	V
$V_{BE(sat)}$ Emitter Saturation Voltage	$I_C = 20\text{mA}$ $I_B = 2\text{mA}$			0.9	
h_{FE} Static Forward Current Transfer Ratio	$I_C = 1\text{mA}$ $V_{CE} = 10\text{V}^*$	25			—
	$I_C = 10\text{mA}$ $V_{CE} = 10\text{V}^*$	40			
	$I_C = 30\text{mA}$ $V_{CE} = 10\text{V}^*$	40			
f_T Transition Frequency	$V_{CE} = 20\text{V}$ $I_C = 10\text{mA}$ $f = 20\text{MHz}$	50			MHz
C_{obo} Output Capacitance	$V_{CB} = 20\text{V}$ $I_E = 0$ $f = 1\text{MHz}$		6		pF

* Pulse Test: Pulse Width = 200 μs , Duty Cycle $\leq 2\%$.