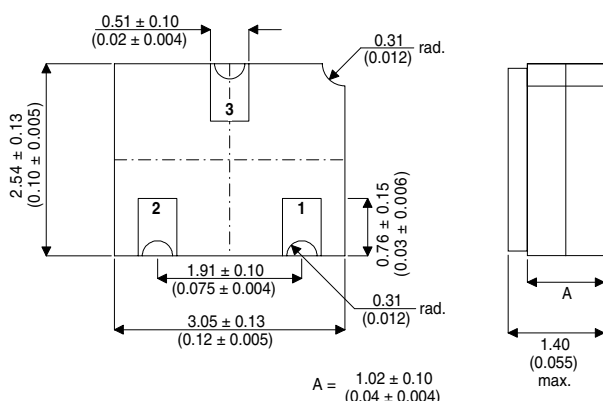


MECHANICAL DATA

Dimensions in mm (inches)



SOT23 CERAMIC (LCC1 PACKAGE)

Underside View

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

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

FEATURES

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

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

V_{CBO}	Collector – Base Voltage	-300V
V_{CEO}	Collector – Emitter Voltage	-300V
V_{EBO}	Emitter – Base Voltage	-5V
I_C	Continuous Collector Current	-500mA
P_{tot}	Power Dissipation @ $T_{amb} = 25^{\circ}C$	680mW
	@ $T_{case} = 25^{\circ}C$	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	°C/W
$R_{th(j-case)}$ Thermal Resistance Junction to Case	80	°C/W

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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	$I_E = -10\mu\text{A}$ $I_C = 0$	-5			V
I_{CBO} Collector Cut-off Current	$V_{CB} = -200\text{V}$ $I_E = 0$			-0.25	μA
I_{EBO} Emitter Cut-off Current	$V_{EB} = -3\text{V}$ $I_E = 0$			-0.1	
$V_{CE(sat)}$ 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			
	$I_C = -30\text{mA}$ $V_{CE} = -10\text{V}^*$	25			
f_T Transition Frequency	$V_{CE} = -20\text{V}$ $I_C = -10\text{mA}$ $f = 20\text{MHz}$	50			MHz
C_{obo} Output Capacitance	$V_{CB} = -20\text{V}$ $f = 1\text{MHz}$			6	pF

* Pulse Test: Pulse Width = $200\mu\text{s}$, Duty Cycle $\leq 2\%$.