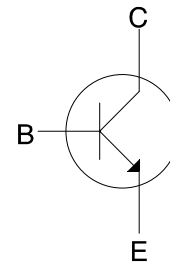
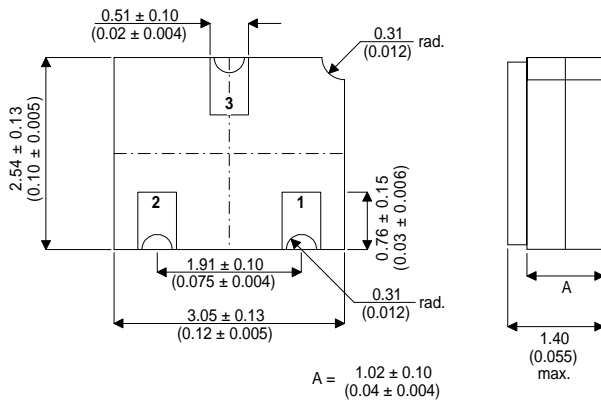


## SILICON NPN HIGH VOLTAGE TRANSISTOR IN CERAMIC SURFACE MOUNT PACKAGE

**MECHANICAL DATA**

Dimensions in mm (inches)



**FEATURES**

- HIGH BREAKDOWN VOLTAGE
- LOW SATURATION VOLTAGES
- LOW CAPACITANCE
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE SOT23CSM (SOT23 COMPATIBLE)

**SOT23 CERAMIC (LCC1 PACKAGE)**

**Underside View**

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

**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	6V
$I_C$	Collector Current	500mA
$P_D$	Total Device Dissipation	350mW
	Derate Above 25°C	2.0mW/°C
$T_j$	Maximum Junction Temperature	200°C
$T_{stg}$	Storage Temperature Range	-55 to 200°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(\text{BR})\text{CBO}}$	Collector - Base breakdown voltage $I_{\text{C}} = 100\mu\text{A}$ $I_{\text{E}} = 0$	300			V
$V_{(\text{BR})\text{CEO}}$	Collector - Emitter breakdown voltage $I_{\text{C}} = 1\text{mA}$ $I_{\text{B}} = 0^*$	300			V
$V_{(\text{BR})\text{EBO}}$	Emitter - Base breakdown voltage $I_{\text{E}} = 100\mu\text{A}$ $I_{\text{C}} = 0$	6			V
$I_{\text{CBO}}$	Collector cut-off current $V_{\text{CB}} = 200\text{V}$ $I_{\text{E}} = 0$			0.1	$\mu\text{A}$
$I_{\text{EBO}}$	Emitter cut-off current $V_{\text{EB}} = 6\text{V}$ $I_{\text{C}} = 0$			0.1	$\mu\text{A}$
$V_{\text{CE}(\text{sat})}$	Collector - Emitter saturation voltage $I_{\text{C}} = 20\text{mA}$ $I_{\text{B}} = 2\text{mA}$			0.5	V
$V_{\text{BE}(\text{sat})}$	Base - Emitter saturation voltage $I_{\text{C}} = 20\text{mA}$ $I_{\text{B}} = 2\text{mA}$			0.9	V
$h_{\text{FE}}$	DC Current gain	$I_{\text{C}} = 1\text{mA}$ $V_{\text{CE}} = 10\text{V}^*$	25		—
		$I_{\text{C}} = 10\text{mA}$ $V_{\text{CE}} = 10\text{V}^*$	40		
		$I_{\text{C}} = 30\text{mA}$ $V_{\text{CE}} = 10\text{V}^*$	40		
$f_{\text{T}}$	Transition frequency $I_{\text{C}} = 10\text{mA}$ $V_{\text{CE}} = 20\text{V}$ $f = 20\text{MHz}$	50			MHz
$C_{\text{ob}}$	Output capacitance $V_{\text{CB}} = 20\text{V}$ $I_{\text{E}} = 0$ $f = 1\text{MHz}$			6	pF

\* Pulse test  $t_{\text{p}} = 200\mu\text{s}$  ,  $\delta = 2\%$