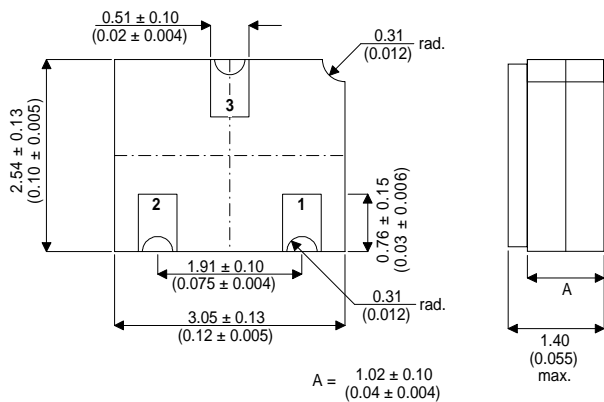


**HIGH SPEED, MEDIUM POWER, NPN  
GENERAL PURPOSE TRANSISTOR IN A  
HERMETICALLY SEALED  
CERAMIC SURFACE MOUNT PACKAGE  
FOR HIGH RELIABILITY APPLICATIONS**

**MECHANICAL DATA**  
Dimensions in mm (inches)



**SOT23 CERAMIC  
(LCC1 PACKAGE)**

**Underside View**

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

**FEATURES**

- SILICON PLANAR EPITAXIAL NPN TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- CECC SCREENING OPTIONS

**APPLICATIONS:**

Hermetically sealed surface mount version of the popular 2N2484 for high reliability applications requiring small size and low weight devices.

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

$V_{CBO}$	Collector – Base Voltage	60V
$V_{CEO}$	Collector – Emitter Voltage	60V
$V_{EBO}$	Emitter – Base Voltage	6V
$I_C$	Collector Current	50mA
$P_D$	Total Device Dissipation @ $T_A = 25^\circ\text{C}$	360mW
	Derate above $25^\circ\text{C}$	2.06mW / °C
$P_D$	Total Device Dissipation @ $T_C = 25^\circ\text{C}$	1.2W
	Derate above $25^\circ\text{C}$	6.85mW / °C
$T_{STG}, T_J$	Operating and Storage Temperature Range	-65 to +200°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(BR)CBO}^*$ Collector – Base Breakdown Voltage	$I_C = 10\mu\text{A}$ $I_E = 0$	60			V
$V_{(BR)CEO}$ Collector – Emitter Breakdown Voltage	$I_C = 10\text{mA}$ $I_B = 0$	60			
$V_{(BR)EBO}$ Emitter – Base Breakdown Voltage	$I_E = 10\mu\text{A}$ $I_C = 0$	6			
$I_{CBO}$ Collector Cut-off Current	$V_{CB} = 45\text{V}$ $I_E = 0$			10	nA
$I_{EBO}$ Emitter Cut-off Current	$V_{BE} = 5\text{V}$ $I_C = 0$			10	
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = 1\text{mA}$ $I_B = 0.1\text{mA}$			0.35	V
$V_{BE(on)}$ Base – Emitter On Voltage	$I_C = 0.1\text{mA}$ $V_{CE} = 5\text{V}$	0.5		0.7	
$h_{FE}$ DC Current Gain	$I_C = 1\mu\text{A}$ $V_{CE} = 5\text{V}$	30			—
	$I_C = 10\mu\text{A}$ $V_{CE} = 5\text{V}$	100		500	
	$I_C = 100\mu\text{A}$ $V_{CE} = 5\text{V}$	175			
	$I_C = 500\mu\text{A}$ $V_{CE} = 5\text{V}$	200			
	$I_C = 1\text{mA}$ $V_{CE} = 5\text{V}$	250			
	$I_C = 10\text{mA}$ $V_{CE} = 5\text{V}$			800	
$f_T$ Current Gain Bandwidth Product	$f = 5\text{MHz}$ $I_C = 0.05\text{mA}$	15			MHz
	$f = 30\text{MHz}$ $I_C = 0.5\text{mA}$	60			
$C_{ob}$ Output Capacitance	$V_{CB} = 5\text{V}$ $I_E = 0$ $f = 140\text{kHz}$			6	pF
$C_{ib}$ Input Capacitance	$V_{BE} = 0.5\text{V}$ $I_C = 0$ $f = 140\text{kHz}$			6	pF
$h_{ie}$ Input Impedance	$V_{CE} = 5\text{V}$	3.5		24	k $\Omega$
$h_{re}$ Voltage Feedback Ratio	$I_C = 1\text{mA}$			800	$\times 10^{-6}$
$h_{fe}$ Small Signal Current Gain	$f = 1\text{kHz}$	150		900	—

\* Pulse Test:  $t_p \leq 300\mu\text{s}$ ,  $\delta \leq 2\%$ .



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