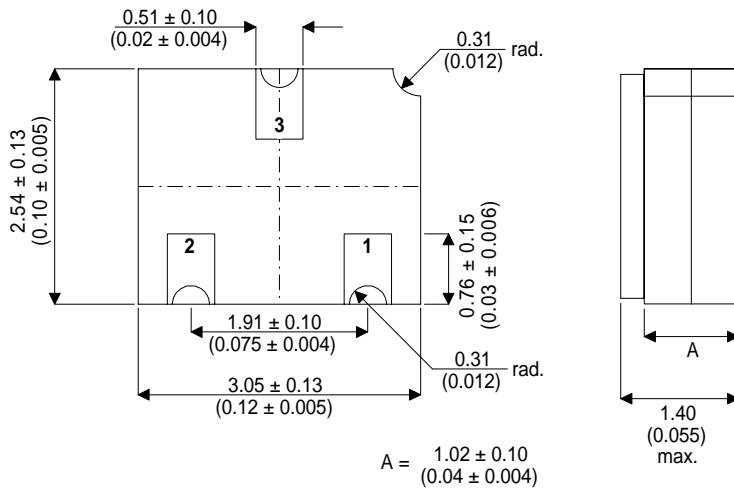


GENERAL PURPOSE TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE FOR HIGH RELIABILITY APPLICATIONS

MECHANICAL DATA

Dimensions in mm (inches)



LCC1 PACKAGE

Underside View

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

FEATURES

- SILICON PNP TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS

APPLICATIONS:

Hermetically sealed surface mount version of the 2N4928 for high reliability / space applications requiring small size and low weight devices.

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

V _{CBO}	Collector – Base Voltage (I _E = 0)	-100V
V _{CEO}	Collector – Emitter Voltage (I _B = 0)	-100V
V _{EBO}	Emitter – Base Voltage (I _C = 0)	-4V
I _C	Collector Current	-100mA
P _D	Total Device Dissipation	350mW
	Derate above 50°C	2.0mW / °C
R _{θJA}	Thermal Resistance Junction to Ambient	500°C/W
T _{stg} , T _j	Storage Temperature, Operating Temp Range	-55 to 200°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{(\text{BR})\text{CEO}^*}$ Collector – Emitter Breakdown Voltage	$I_{\text{C}} = -10\text{mA}$ $I_{\text{B}} = 0$	-100			V
$V_{(\text{BR})\text{CBO}^*}$ Collector – Base Breakdown Voltage	$I_{\text{C}} = -100\mu\text{A}$ $I_{\text{E}} = 0$	-100			
$V_{(\text{BR})\text{EBO}^*}$ Emitter – Base Breakdown Voltage	$I_{\text{E}} = -100\mu\text{A}$ $I_{\text{C}} = 0$	-4.0			
I_{CBO^*} Collector – Base Cut-off Current	$I_{\text{B}} = 0$ $V_{\text{CB}} = -50\text{V}$			-0.5	μA
I_{EBO^*} Emitter Cut-off Current ($I_{\text{C}} = 0$)	$I_{\text{C}} = 0$ $V_{\text{EB}} = 3\text{V}$			-0.5	
$V_{\text{CE}(\text{sat})^*}$ Collector – Emitter Saturation Voltage	$I_{\text{C}} = -10\text{mA}$ $I_{\text{B}} = -1\text{mA}$			-0.5	V
$V_{\text{BE}(\text{ON})}$ Base – Emitter On Voltage	$I_{\text{C}} = -10\text{mA}$ $V_{\text{CE}} = -10\text{V}$			-1.0	
h_{FE^*} DC Current Gain	$I_{\text{C}} = -1\text{mA}$ $V_{\text{CE}} = -10\text{V}$	20			—
	$I_{\text{C}} = -10\text{mA}$ $V_{\text{CE}} = -10\text{V}$	25		200	
	$I_{\text{C}} = -50\text{mA}$ $V_{\text{CE}} = -10\text{V}$	20			
f_{T} Transition Frequency	$I_{\text{C}} = -20\text{mA}$ $V_{\text{CE}} = -20\text{V}$ $f = 100\text{MHz}$	100		1,000	MHz
C_{cb} Collector – Base Capacitance	$V_{\text{CB}} = -20\text{V}$ $I_{\text{E}} = 0$ $f = 140\text{kHz}$			6.0	pF
C_{eb} Collector – Emitter Capacitance	$V_{\text{BE}} = -2.0\text{V}$ $I_{\text{C}} = 0$ $f = 140\text{kHz}$			40	

* Pulse test $t_{\text{p}} = 300\mu\text{s}$, $\delta \leq 2\%$

f_{T} is defined as the frequency at which h_{FE} extrapolates to unity.