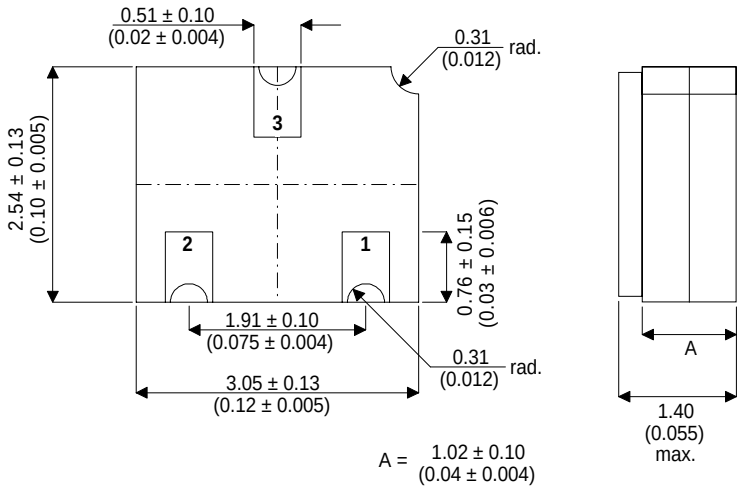
2N4928CSM

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
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	500°C/W
T_{stg}, T_j	Storage Temperature,Operating Temp Range	–55 to 200°C

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

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

* Pulse test t_p = 300µs , $\delta \leq 2\%$

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

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