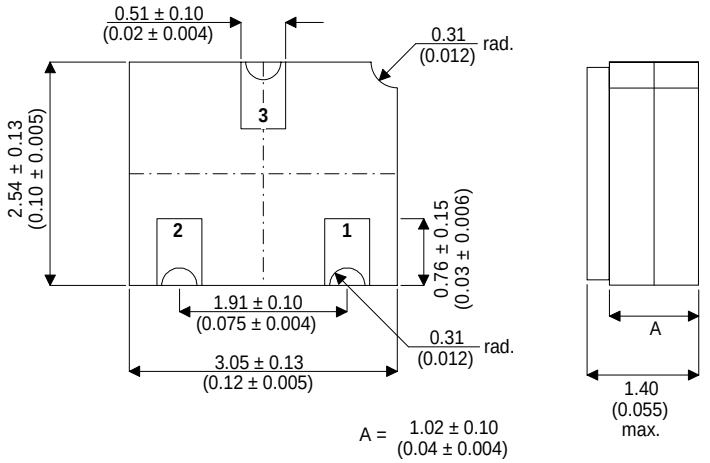
2N2369ACSM

HIGH SPEED, MEDIUM POWER, NPN SWITCHING 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 2N2369A for high reliability / space applications requiring small size and low weight devices.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		40V
V_{CEO}	Collector – Emitter Voltage		15V
V_{EBO}	Emitter – Base Voltage		4.5V
I_C	Collector Current		200mA
P_D	Total Device Dissipation	@ T_A =25°C	360mW
		Derate above 25°C	2.06mW / °C
P_D	Total Device Dissipation	@ T_C =25°C	680mW
		Derate above 25°C	6.85mW / °C
T_{STG} , T_J	Operating and Storage Temperature Range		–65 to +200°C

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ELECTRICAL CHARACTERISTICS (T_A = 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	15			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	I_C = 10µA	I_E=0	40			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 10µA	I_C=0	4.5			V
I_{CES}	Collector – Emitter Cut-off Current	V_{CE} = 20V	V_{BE} = 0			0.40	µA
I_{CBO}	Collector – Base Cut-off Current	V_{CB} = 20V	T_A = +150°C			30	
$V_{CE(sat)*}$	Collector – Emitter Saturation Voltage	I_C = 10mA	I_B = 1mA			0.20	V
			T_A = +125°C			0.30	
		I_C = 30mA	I_B = 3mA			0.25	
		I_C = 100mA	I_B = 10mA			0.50	
$V_{BE(sat)*}$	Base – Emitter Saturation Voltage	I_C = 10mA, I_B = 1mA	T_A = +25°C	0.70		0.85	V
			T_A = +125°C	0.59			
			T_A = –55°C			1.02	
		I_C = 30mA	I_B = 3mA			1.15	
		I_C = 100mA	I_B = 10mA			1.60	
h_{FE*}	Current Gain	I_C = 10mA	V_{CE} = 0.35V	40			—
			T_A = –55°C	20			
		I_C = 30mA	V_{CE} = 0.4V	30			
		I_C = 10mA	V_{CE} = 1.0V			120	
		I_C = 100mA	V_{CE} = 1V	20			
f_T	Transition Frequency	I_C = 10mA, f = 100MHz	V_{CE} = 10V	500			MHz
C_{ob}	Output Capacitance	V_{CB} = 5V, f = 140kHz	I_E = 0			4	pF
t_s	Storage Time	I_C = 10mA, I_{B1} = I_{B2} = 10mA				13	ns
t_{on}	Turn–On Time	I_C = 10mA	V_{CC} = 3V			12	
t_{off}	Turn–Off Time	I_{B1} = 3mA	I_{B2} = 1.5mA			18	

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

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