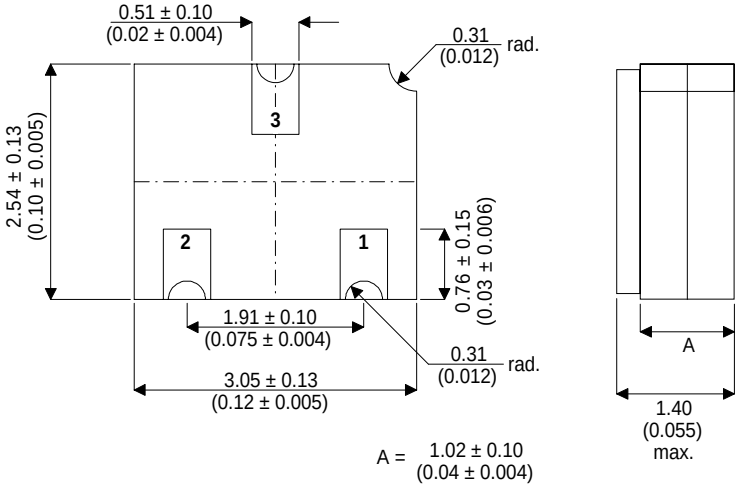
2N2894CSM

HIGH SPEED, MEDIUM POWER, PNP 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 PNP TRANSISTOR**
- **HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)**
- **SCREENING OPTIONS AVAILABLE**
- **HIGH SPEED, LOW SATURATION SWITCH**

APPLICATIONS:

Hermetically sealed surface mount version of the popular 2N2894 for high reliability applications requiring small size and low weight devices.

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

V_{CBO}	Collector – Base Voltage		-12V
V_{CEO}	Collector – Emitter Voltage		-12V
V_{EBO}	Emitter – Base Voltage		-4V
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	1.2W
		Derate above 25°C	6.85mW / °C
T_{STG} , T_J	Operating and Storage Temperature Range		–65 to +200°C

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO*}$	Collector – Base Breakdown Voltage	I_C = 10µA	I_E = 0	– 12			V
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	I_C = 10mA	I_B = 0	– 12			
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 10µA	I_C = 0	– 4			
I_{CBO}	Collector Cut-off Current	V_{CB} = –6V	T_{amb} = 125°C			– 10	µA
I_{CES}	Collector Cut-off Current	V_{BE} = 0	V_{CE} = –6V			– 80	nA
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = –10mA	I_B = –1mA			–0.15	V
		I_C = –30mA	I_B = –3mA			–0.20	
		I_C = –100mA	I_B = –10mA			– 0.50	
$V_{BE(sat)}$	Base – Emitter On Voltage	I_C = –10mA	I_B = –1mA	–0.78		–0.98	V
		I_C = –30mA	I_B = –3mA	–0.85		–1.2	
		I_C = –100mA	I_B = –10mA			–1.7	
h_{FE}	DC Current Gain	I_C = –10mA	V_{CE} = –0.3V	30			—
		I_C = –30mA	V_{CE} = –0.5V	40		150	
		I_C = –100mA	V_{CE} = –1V	25			
		I_C = –30mA	V_{CE} = –0.5V T_{amb} = 125°C	17			
f_T	Current Gain Bandwidth Product	V_{CE} = –10V I_C = –30mA	f = 100MHz	400			MHz
C_{ebo}	Emitter – Base – Capacitance	V_{EB} = –5V f = 1MHz	I_C = 0			6	pF
C_{cbo}	Collector – Base – Capacitance	V_{CB} = –5V f = 1MHz	I_C = 0			6	pF
t_{on}	Turn on Time	I_C = –30mA I_{B2} = –1.5mA	V_{CE} = –2V			60	ns
t_{off}	Turn off Time	I_C = –30mA I_{B1} = I_{B2}= –1.5mA	V_{CE} = –2V			9	ns

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

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