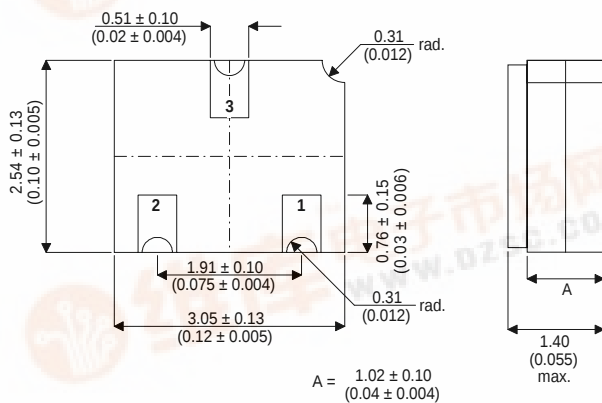


2N2894ACSM

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 2N2894A 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	-12V
V_{CEO}	Collector – Emitter Voltage	-12V
V_{EBO}	Emitter – Base Voltage	-4V
I_C	Collector Current	200mA
P_D	Total Device Dissipation @ $T_A = 25^\circ\text{C}$	360mW
	Derate above 25°C	2.06mW / $^\circ\text{C}$
T_{STG}, T_J	Operating and Storage Temperature Range	-65 to +200 $^\circ\text{C}$



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	nA
I _{CES} Collector Cut-off Current	V _{BE} = 0 V _{CE} = –6V			– 80	
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 f = 100MHz I _C = –30mA	400			MHz
C _{ebo} Emitter – Base – Capacitance	V _{EB} = –5V I _C = 0 f = 1MHz			6	pF
C _{cbo} Collector – Base – Capacitance	V _{CB} = –5V I _C = 0 f = 1MHz			6	pF
t _{on} Turn on Time	I _C = –30mA V _{CE} = –2V I _{B2} = –1.5mA			60	ns
t _{off} Turn off Time	I _C = –30mA V _{CE} = –2V I _{B1} = I _{B2} = –1.5mA			9	ns

* Pulse Test: t_p ≤ 300μs, δ ≤ 2%.