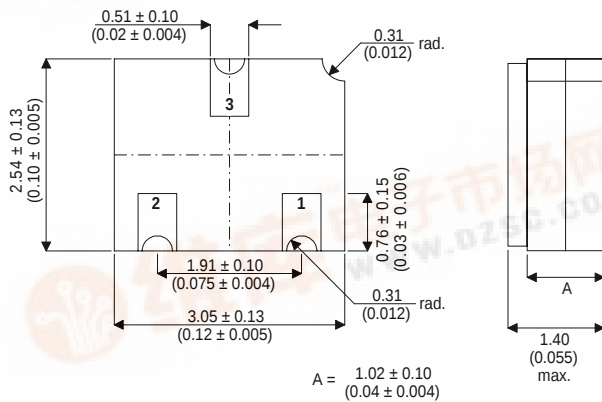


2N2907ACSM

HIGH SPEED, MEDIUM POWER, PNP 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 PNP TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- HIGH SPEED SATURATED SWITCHING

APPLICATIONS:

Hermetically sealed surface mount version of the popular 2N2907A for high reliability / space applications requiring small size and low weight devices.

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

V_{CBO}	Collector - Base Voltage	-60V
V_{CEO}	Collector - Emitter Voltage	-60V
V_{EBO}	Emitter - Base Voltage	-5V
I_C	Collector Current	600mA
P_D	Total Device Dissipation	350mW
P_D	Derate above $50^{\circ}C$	2.0mW / $^{\circ}C$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	350 $^{\circ}C$ / W
T_{STG}	Storage Temperature, Operating Temp Range	-55 to 200 $^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _{CEO(sus)} * Collector – Emitter Sustaining Voltage	I _C = 10mA	–60			V
V _{(BR)CBO} * Collector – Base Breakdown Voltage	I _C = 10μA	–60			V
V _{(BR)EBO} * Emitter – Base Breakdown Voltage	I _E = 10μA I _C = 0	–5			V
I _{CEX} * Collector Cut-off Current	V _{CE} = 30V V _{BE} = 0.5V			50	nA
I _{CBO} * Collector – Base Cut-off Current	I _E = 0 V _{CB} = 50V T _C = 125°C			0.01 10	μA
I _{BEO} Base Cut-off Current	V _{CE} = 30V V _{BE} = 0.5V			50	nA
V _{CE(sat)} * Collector – Emitter Saturation Voltage	I _C = 150mA I _B = 15mA I _C = 500mA I _B = 50mA			–0.4 –1.6	V
V _{BE(sat)} * Base – Emitter Saturation Voltage	I _C = 150mA I _B = 15mA I _C = 500mA I _B = 50mA			–1.3 –2.6	V
h _{FE} * DC Current Gain	I _C = 0.1mA V _{CE} = 10V	75			—
	I _C = 1mA V _{CE} = 10V	100			
	I _C = 10mA V _{CE} = 10V	100			
	I _C = 150mA V _{CE} = 10V	100		300	
	I _C = 500mA V _{CE} = 10V	50			

* Pulse test t_p = 300μs, δ ≤ 2%

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
f _T Transition Frequency	I _C = 50mA V _{CE} = 20V f = 100MHz	200			MHz
C _{ob} Output Capacitance	V _{CB} = 10V I _E = 0 f = 1.0MHz			8	pF
C _{ib} Input Capacitance	V _{BE} = 2V I _C = 0 f = 1.0MHz			30	pF

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
t _{on} Turn-on Time	V _{CC} = 30V I _C = 150mA I _{B1} = 15mA		26	45	ns
t _d Delay Time			6.0	10	
t _r Rise Time			20	40	
t _{off} Turn-off Time	V _{CC} = 6V I _C = 150mA I _{B1} = I _{B2} = 15mA		70	100	ns
t _s Storage Time			50	80	
t _f Fall Time			20	30	