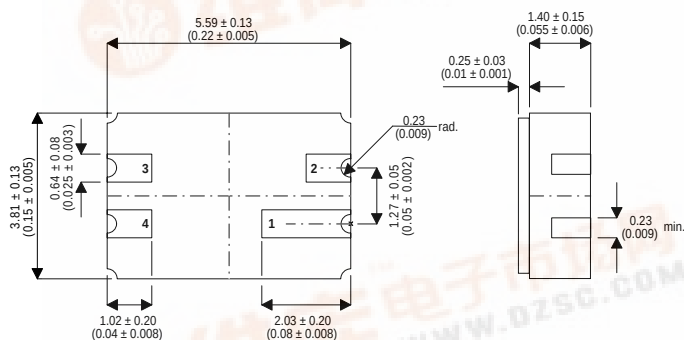


2N4033CSM4

HIGH SPEED PNP MEDIUM VOLTAGE TRANSISTOR IN A CERAMIC SURFACE MOUNT PACKAGE

MECHANICAL DATA

Dimensions in mm (inches)



LCC3 PACKAGE Underside View

PAD 1 – Collector

PAD 3 – Emitter

PAD 2 – N/C

PAD 4 – Base

FEATURES

- CERAMIC SURFACE MOUNT HERMETIC PACKAGE
- LOW WEIGHT
- SMALL FOOTPRINT
- SCREENING OPTIONS AVAILABLE

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

V_{CEO}	Collector – Emitter Voltage	-80V
V_{CBO}	Collector – Base Voltage	-80V
V_{EBO}	Emitter – Base Voltage	-5V
I_C	Continuous Collector Current	-1A
P_D	Total Device Dissipation at $T_A = 25^{\circ}C$	400mW
	Derate above $25^{\circ}C$	2.28 mW/ $^{\circ}C$
T_{stg}	Operating and Storage Temperature Range	-55 to +200 $^{\circ}C$



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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO} Collector Cut Off Current	V _{CB} = -60V			-50	nA
	T _A = 150°C			-50	μA
I _{EBO} Emitter Cut Off Current	V _{EB} = -5V			-10	μA
V _{CE(sat)} Collector Emitter Saturation Voltage ¹	I _C = -150mA I _B = -15mA			-0.15	V
	I _C = -500mA I _B = -50mA			0.50	
V _{BE(sat)} Base Emitter Saturation Voltage ¹	I _C = -150mA I _B = -15mA			-0.9	V
V _{BE(on)} Base Emitter on Voltage	I _C = -500mA V _{CE} = -0.5V ¹			-1.1	V
V _{(BR)CEO} Collector Emitter Breakdown Voltage	I _C = -10mA	-80			V
V _{(BR)CBO} Collector Base Breakdown Voltage	I _C = -10μA	-80			V
V _{(BR)EBO} Emitter Base Breakdown Voltage	I _E = -10μA	-5.0			V
h _{FE} DC Current Gain	I _C = -100mA V _{CE} = -5.0V @ -55°C ¹	40			—
	I _C = -100μA V _{CE} = -5.0V	75			
	I _C = -100mA V _{CE} = -5.0V ¹	100		300	
	I _C = -500mA V _{CE} = -5.0V ¹	70			
	I _C = -1.0A V _{CE} = -5.0V ¹	25			

SMALL SIGNAL CHARACTERISTICS

C _{obo} Output Capacitance	V _{CE} = -10V f = 1MHz			20	pF
C _{ibo} Input Capacitance	V _{EB} = -0.5V f = 1MHz			110	
h _{fe} Small Signal Gain	I _C = -50mA V _{CE} = -10V f = 100MHz	1.5		5.0	—

SWITCHING CHARACTERISTICS

t _{on} Turn On Time	I _C = -500mA I _{B1} = -I _{B2} = -50mA			100	ns
t _f Fall Time				50	
t _s Storage Time				350	

¹Pulse test t_p = 300μs , δ = 1%