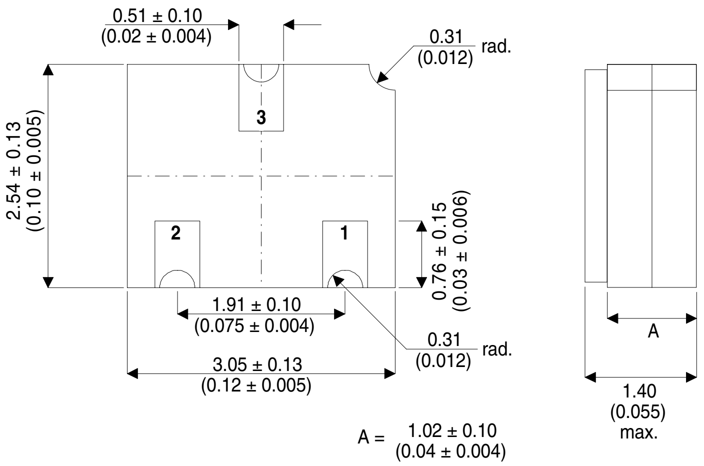
SEME LAB

2N5551CSM

HIGH VOLTAGE 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 2N5551 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	180V
V_{CEO}	Collector – Emitter Voltage	160V
V_{EBO}	Emitter – Base Voltage	6V
I_C	Collector Current	600mA
P_D	Total Device Dissipation @ T_A =25°C	350mW
	Derate >25°C	0.2°C/mW
T_{STG} , T_J	Operating and Storage Temperature Range	–55 to +150°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

Document Number 6528
Issue 2

2N5551CSM

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 = 1.0mA	I_B = 0mA	160			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	I_C = 100µA	I_E = 0mA	180			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 10µA	I_C = 0mA	6			V
I_{CBO}	Collector – Base Cut-off Current	V_{CB} = 120V	I_E = 0			50	nA
			T_A = +100°C			50	µA
I_{EBO}	Emitter – Base Cut-off Current	V_{EB} = 4V	I_C = 0			50	nA
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 10mA	I_B = 1.0mA			0.15	V
		I_C = 50mA	I_B = 5mA			0.20	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 10mA	I_B = 1.0mA			1.0	V
		I_C = 50mA	I_B = 5mA			1.0	
h_{FE*}	Current Gain	I_C = 1.0mA	V_{CE} = 5V	80			—
		I_C = 10mA	V_{CE} = 5V	80		250	
		I_C = 50mA	V_{CE} = 5V	30			
f_T	Current Gain Bandwidth Product	I_C = 10mA f = 100MHz	V_{CE} = 10V	100		300	—
C_{obo}	Output Capacitance	V_{CB} = 10V f = 1.0 MHz	I_E = 0			6	pF
C_{ib}	Input Capacitance	V_{EB} = 0.5V f = 1.0 MHz	I_C = 0			60	
NF	Noise Figure	I_C = 250µA R_S=1.0 k	V_{CE} = 5V f = 1.0 KHz			8	dB
h_{FE*}	Current Gain	V_{CE} = 10V f = 1.0 KHz	I_C =1.0 mA	50		200	—

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