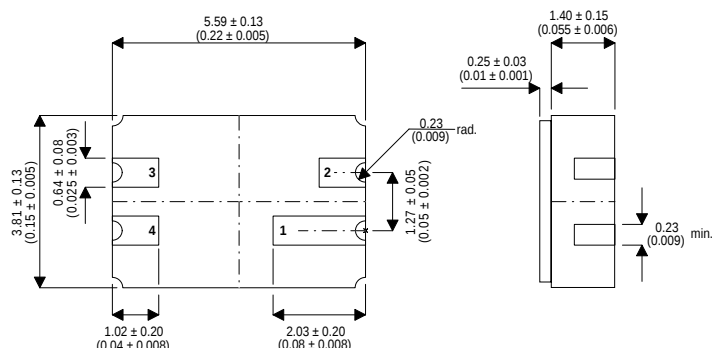


HIGH VOLTAGE, MEDIUM POWER, NPN TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE FOR HIGH RELIABILITY APPLICATIONS

MECHANICAL DATA

Dimensions in mm (inches)



LCC3 PACKAGE Underside View

PAD 1 – Collector PAD 3 – Emitter
PAD 2 – N/C PAD 4 – Base

FEATURES

- SILICON PLANAR EPITAXIAL NPN TRANSISTOR
- HERMETIC CERAMIC SURFACE MOUNT PACKAGE
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- HIGH VOLTAGE

APPLICATIONS:

Hermetically sealed surface mount version of the popular 2N3439 for high reliability / space applications requiring small size and low weight devices.

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

V_{CBO}	Collector – Base Voltage	450V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	350V
V_{EBO}	Emitter – Base Voltage ($I_B = 0$)	7V
I_C	Collector Current	500mA
P_D	Total Device Dissipation	350mW
P_D	Derate above 50°C	$2.0\text{mW} / ^{\circ}\text{C}$
R_{ja}	Thermal Resistance Junction to Ambient	350°C/W
T_{stg}	Storage Temperature	-55 to 200°C

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}^*$ Collector – Emitter Sustaining Voltage	$I_C = 50mA$	350			V
I_{CEX}^* Collector Cut-off Current ($I_C = 0$)	$I_B = 0$ $V_{CE} = 450V$			500	μA
I_{CBO}^* Collector – Base Cut-off Current	$I_E = 0$ $V_{CB} = 300V$			20	μA
	$T_C = 125^{\circ}C$			10	μA
I_{EBO}^* Emitter Cut-off Current ($I_C = 0$)	$I_C = 0$ $V_{EB} = 6V$ (off)			20	μA
$V_{CE(sat)}^*$ Collector – Emitter Saturation Voltage	$I_C = 50mA$ $I_B = 4mA$			0.5	V
$V_{BE(sat)}^*$ Base – Emitter Saturation Voltage	$I_C = 50mA$ $I_B = 4mA$			1.3	
h_{FE}^* DC Current Gain	$I_C = 20mA$ $I_C = 10mA$	40		160	—

* Pulse test $t_p = 300\mu s$, $\delta \leq 2\%$

DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
f_T Transition Frequency	$I_C = 10mA$ $V_{CE} = 10V$ $f = 5MHz$	15			MHz
C_{ob} Output Capacitance	$V_{CB} = 10V$ $I_E = 0$ $f = 1.0MHz$			10	pF
h_{fe} Small Signal Current Gain	$I_C = 5mA$ $V_{CE} = 10V$ $f = 1kHz$	25			