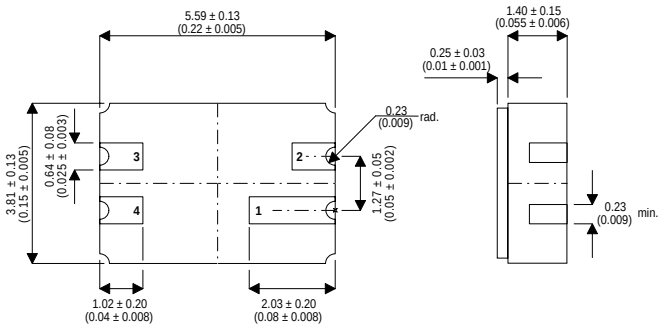
2N3439CSM4R
2N3440CSM4R

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 – N/C
PAD 2 – Emitter	PAD 4 – Base

FEATURES

- **Hermetic Ceramic 4 pin Surface Mount Package - LCC3**
- **High Voltage Small Signal Type**
- **Full Screening Options Available**
- **“R” Denotes Reverse Pinning**

APPLICATIONS:

The 2N3439CSM4 and 2N3440CSM4 are high voltage silicon epitaxial planar transistors mounted in the popular 4 pin ceramic surface mount hermetically sealed package. These products are specifically intended for use in High reliability systems and can be ordered with a full range of screening options from standard Military (equivalent to CECC Full Assessment Level) through all options up to full space flight level.

ABSOLUTE MAXIMUM RATINGS		2N3439CSM4	2N3440CSM4
V_{CBO}	Collector – Base Voltage (I_E = 0)	450V	300V
V_{CEO}	Collector – Emitter Voltage (I_B = 0)	350V	250V
V_{EBO}	Emitter – Base Voltage (I_B = 0)	7V	7V
I_C	Collector Current.	1A	1A
I_B	Base Current.	0.5A	0.5A
P_{tot}	Total Power Dissipation at T_{amb} = 25°C with product mounted on a suitable PCB to provide a heat path.	0.5W	0.5W
T_{stg}	Storage Temperature.	–65 to +200°C	
T_j	Maximum Junction Temperature.	+200°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
Prelim. 11/98

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

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$*	Collector – Emitter Sustaining Voltage (I_B = 0)	I_C = 50mA	2N3439CSM4R	350			V
			2N3440CSM4R	250			
I_{CEX}*	Collector Cut-off Current (V_{BE} = –1.5V)		2N3439CSM4R			500	µA
			2N3440CSM4R			500	
I_{CBO}*	Collector – Base Cut-off Current (I_E = 0)	V_{CB} = 360V	2N3439CSM4R			20	µA
		V_{CB} = 250V	2N3440CSM4R			20	
I_{CEO}*	Collector – Cut-off Current (I_B = 0)	V_{CE} = 300V	2N3439CSM4R			20	µA
		V_{CE} = 200V	2N3440CSM4R			50	
I_{EBO}*	Emitter Cut-off Current (I_C = 0)	V_{EB} = 6V				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	V_{CE} = 10V	40			—
		2N3439CSM4R only					
		I_C = 20mA	V_{CE} = 10V	30			

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

DYNAMIC CHARACTERISTICS (T_{case} = 25°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		f = 10MHz			10	pF
h_{fe}	Small Signal Current Gain	I_C = 5mA	V_{CE} = 10V	f = 1kHz	25			

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.