



PRELIMINARY

SOLID STATE DEVICES, INC.

14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

Designer's Data Sheet

FEATURES:

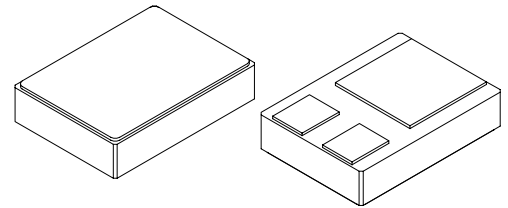
Optimized for 12V and 15V auxiliary output power supplies. The EPION series has been designed to provide low forward voltage drops and small delta shifts in reverse recovery time at high temperature minimizing switching losses.

- **Radiation Tolerant**
- **Ultra Fast Recovery Time**
- **Low Forward Voltage**
- **Low Reverse Leakage**
- **Surface Mountable Package**
- **Hermetically Sealed Package**
- **High Reverse Blocking Voltage**
- **175°C Operating T_J**

**5R6/LC3
thru
15R6/LC3**

**40AMPS
50-150 VOLTS
EPION
HIGH SPEED
RECTIFIER**

LCC3



Maximum Ratings	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	5R 7R 10R 12R 15R	$V_{RM(rep)}$ V_R	50 70 100 125 150 Volts
Half Wave Rectified Forward Current. Averaged Over Full Cycle (Resistive load, 60Hz, Sine Wave, T _C = 55°C) <u>1/</u>	I_o	40	Amps
Peak Repetitive Forward Current (T _C = 55°C, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses) <u>1/</u>	$I_{FM(rep)}$	400	Amps
Peak Surge Current (T _C = 55°C, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse) <u>1/</u>	$I_{FM(surge)}$	1000	Amps
Operating and Storage Temperature	T _J & T _{stg}	-65 TO +175	°C
Maximum Thermal Resistance Junction to Case, <u>1/</u>	R _{θJC}	2	°C/W

1/ Pins 2 & 3 tied together

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RC0020A

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thru
15R6/LC3**

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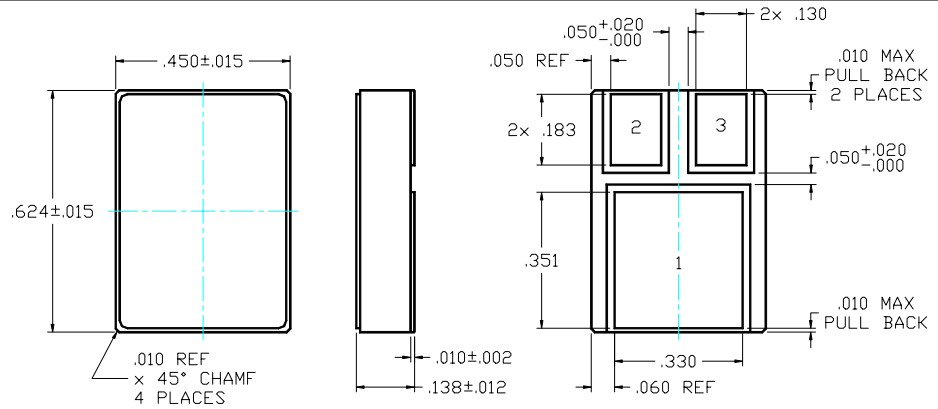
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Electrical Characteristics	SYMBOL	VALUE	UNITS
Reverse Leakage Current ($T_J = 25^\circ\text{C}$, 300 μs pulse minimum $V_R = 150\text{V}$)	I_{R1}	75	μA
Reverse Leakage Current ($T_J = 125^\circ\text{C}$, 300 μs pulse minimum $V_R = 150\text{V}$)	I_{R2}	250	μA
Instantaneous Forward Voltage Drop $\frac{1}{}$ ($T_J = 25^\circ\text{C}$, 300 μsec pulse minimum $I_F = 40\text{A}$ $I_F = 60\text{A}$)	I_{F1}	0.90 1.0	V_{DC} V_{DC}
Instantaneous Forward Voltage Drop $\frac{1}{}$ ($T_J = 125^\circ\text{C}$, 300 μsec pulse minimum $I_F = 40\text{A}$ $I_F = 60\text{A}$)	I_{F2}	0.80 0.90	V_{DC} V_{DC}
Reverse Recovery Time ($T_A = 25^\circ\text{C}$, $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$)	T_{RR1}	75	nsec
Reverse Recovery Time ($T_A = 150^\circ\text{C}$, $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$)	T_{RR2}	120	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	400	pF

CASE OUTLINE: LCC3

PIN 1: CATHODE
PIN 2: ANODE
PIN 3: ANODE



$\frac{1}{}$ With pins 2 & 3 tied together

TOLERANCES ARE ±.005 UNLESS OTHERWISE SPECIFIED

FORWARD VOLTAGE @ $T_J = 25^\circ\text{C}$

FORWARD VOLTAGE @ $T_J = 125^\circ\text{C}$

