

HIGH VOLTAGE POWER SCHOTTKY RECTIFIER

MAIN PRODUCT CHARACTERISTICS

PRELIMINARY DATASHEET

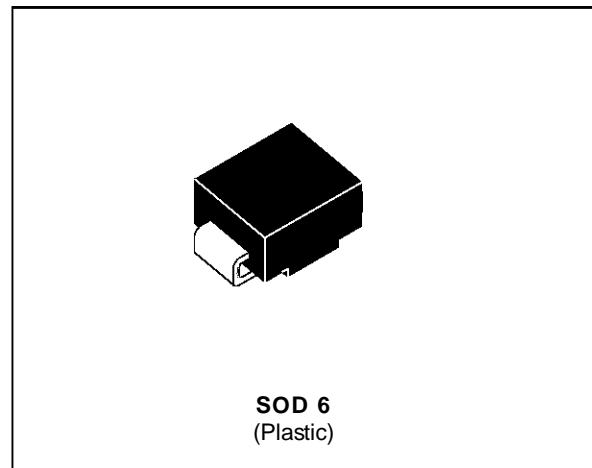
$I_{F(av)}$	1.5 A
V_{RRM}	100 V
$V_F (max)$	0.70 V

FEATURES AND BENEFITS

- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD VOLTAGE DROP
- LOW CAPACITANCE
- HIGH REVERSE AVALANCHE SURGE CAPABILITY

DESCRIPTION

High voltage Schottky rectifier suited for SLIC protection during the card insertion operation.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		100	V
$I_{F(RMS)}$	RMS Forward Current		10	A
$I_{F(AV)}$	Average Forward Current	$T_L = 90^\circ\text{C}$ $\delta = 0.5$ $V_R = 60\text{V}$	1.5	A
I_{FSM}	Surge Non Repetitive Forward Current	$t_p = 10\text{ ms}$ Sinusoidal	75	A
I_{RRM}	Peak Repetitive Reverse Current	$t_p = 2\ \mu\text{s}$ $F = 1\text{KHz}$	1	A
I_{RSM}	Non Repetitive Peak Reverse Current	$t_p = 100\ \mu\text{s}$	1	A
T_{stg}	Storage Temperature Range		- 65 to + 150	$^\circ\text{C}$
T_j	Max. Junction Temperature		115	$^\circ\text{C}$
dV/dt	Critical Rate of Rise of Reverse Voltage		1000	$\text{V}/\mu\text{s}$

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-l)}$	Junction-leads	20	°C/W

ELECTRICAL CHARACTERISTICS**STATIC CHARACTERISTICS**

Symbol	Parameter	Tests Conditions		Min.	Typ.	Max.	Unit
V_F *	Forward Voltage Drop	$T_j = 25^\circ\text{C}$	$I_F = 100\text{ mA}$			0.43	V
		$T_j = 25^\circ\text{C}$	$I_F = 3\text{ A}$			0.95	
		$T_j = 100^\circ\text{C}$	$I_F = 1.5\text{ A}$		0.57	0.71	
		$T_j = 100^\circ\text{C}$	$I_F = 3\text{ A}$		0.67	0.85	
I_R **	Reverse Leakage Current	$T_j = 25^\circ\text{C}$	$V_R = V_{RRM}$			30	μA
		$T_j = 100^\circ\text{C}$			1	5	mA

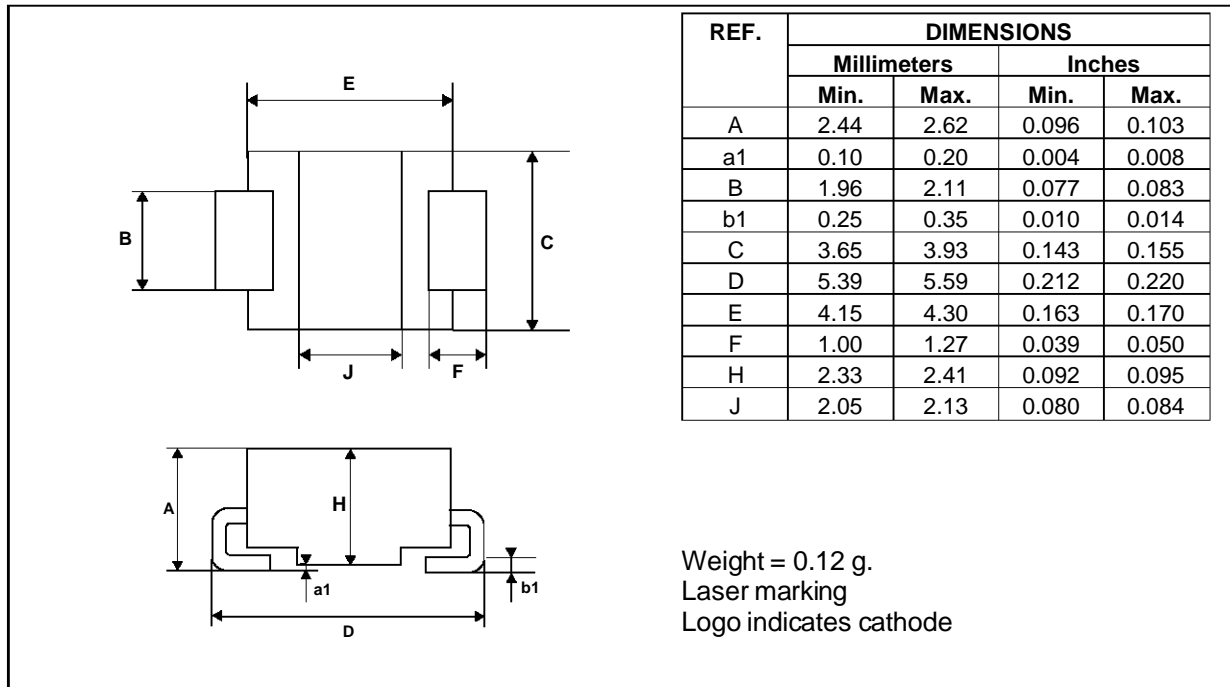
Pulse test : * $t_p = 380\ \mu\text{s}$, duty cycle < 2 %
** $t_p = 5\ \text{ms}$, duty cycle < 2%

To evaluate the conduction losses use the following equation :

$$P = 0.65 \times I_{F(AV)} + 0.067 I_{F(RMS)}^2$$

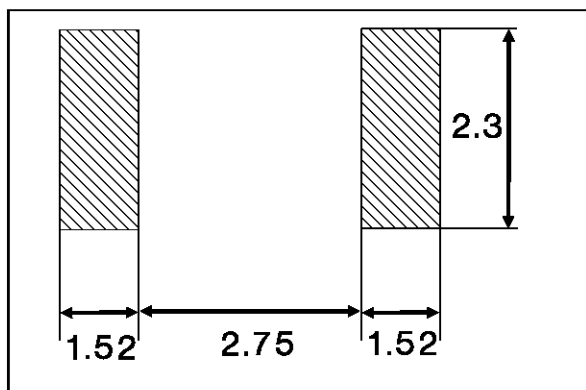
Typical junction capacitance, $V_R = 0\text{V}$ $F = 1\text{MHz}$ $T_j = 25^\circ\text{C}$ $C = 365\text{pF}$

PACKAGE MECHANICAL DATA
SOD 6 (Plastic)



FOOTPRINT DIMENSIONS (in millimeters)
SOD6 (Plastic)

Voltage (V)	100
Marking	E11



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