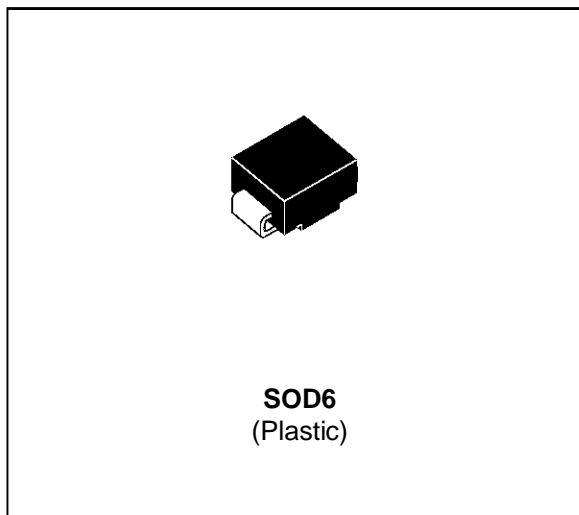


HIGH EFFICIENCY FAST RECOVERY DIODE

MAIN PRODUCT CHARACTERISTICS

PRELIMINARY DATASHEET

$I_{F(AV)}$	1 A
V_{RRM}	200 V
$V_F(max)$	0.71 V


FEATURES AND BENEFITS

- VERY LOW SWITCHING LOSSES
- LOW FORWARD VOLTAGE DROP
- HIGH REVERSE AVALANCHE ENERGY CAPABILITY

DESCRIPTION

Single chip rectifier suited to Switch Mode Power Supply and high frequency DC to DC converters.

Packaged in SOD6, this surface mount device is intended for use in low voltage, high frequency inverters, free wheeling and polarity protection applications.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		200	V
$I_{F(RMS)}$	RMS forward current		8	A
$I_{F(AV)}$	Average forward current	$T_{lead}=140^{\circ}C$ $\delta = 0.5$	1	A
I_{FSM}	Surge Non Repetitive Forward Current	$t_p=10ms$ Sinusoidal	60	A
T_{stg}	Storage and Junction Temperature Range		- 65 to + 150	$^{\circ}C$
T_j	Maximum Junction Temperature		150	$^{\circ}C$

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth (j-l)	Junction to Lead Thermal Resistance (on infinite heatsink)	13	°C/W

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Parameters	Test Conditions		Min.	Typ.	Max.	Unit
I _R *	Reverse Leakage Current	T _j = 25°C	V _R = V _R RRM			3	μA
		T _j = 125°C			180	400	
V _F **	Forward Voltage Drop	T _j = 25°C	I _F = 1 A			0.9	V
		T _j = 150°C	I _F = 1 A		0.65	0.71	

Pulse test : * tp = 380 μs, duty cycle < 2 %

** tp = 5 ms, duty cycle < 2 %

RECOVERY CHARACTERISTICS

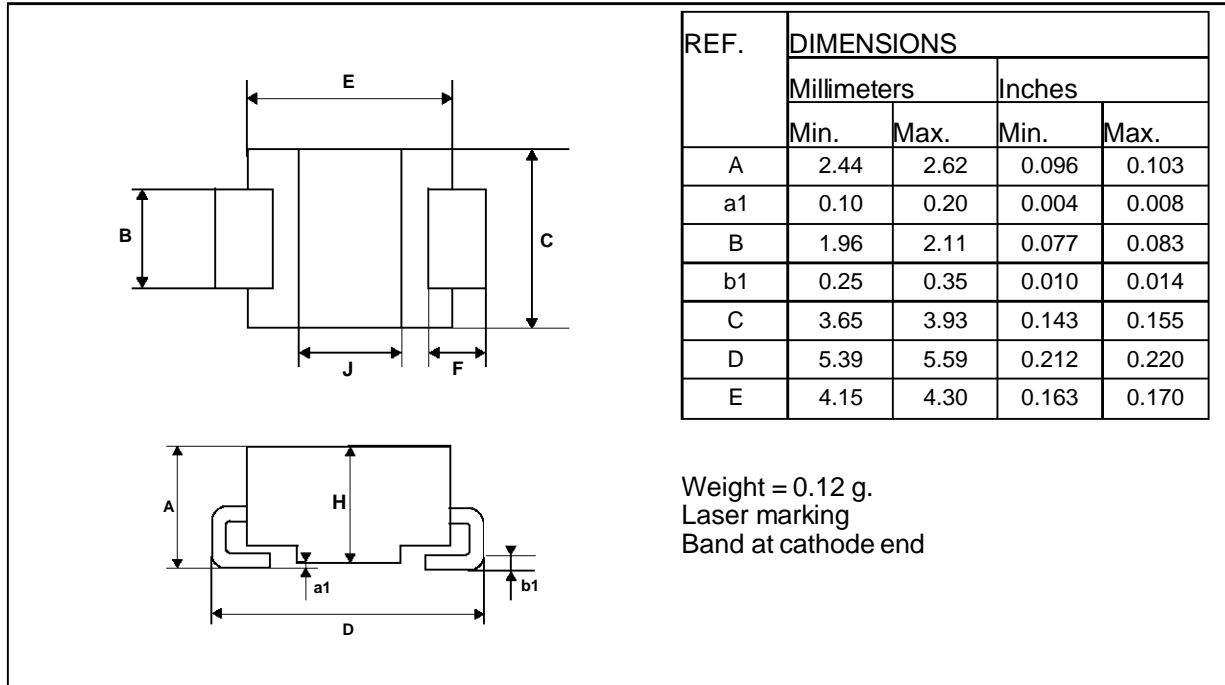
Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t _{rr}	T _j = 25°C	I _F = 0.5 A V _R = 30V	I _{rr} = 0.25 A			25	ns
		I _F = 1 A V _R = V _R RRM	di _F /dt = - 50 A/μs		25	35	
t _{fr}	T _j = 25°C	I _F = 1 A	di _F /dt = 100 A/μs	measured at 1 V		25	V
V _{FP}	T _j = 25°C	I _F = 1 A	di _F /dt = 100 A/μs	measured at 1 V		5	

To evaluate the maximum conduction losses use the following equation :

$$P = 0.58 \times I_{F(AV)} + 0.118 \times I_{F(RMS)}^2$$

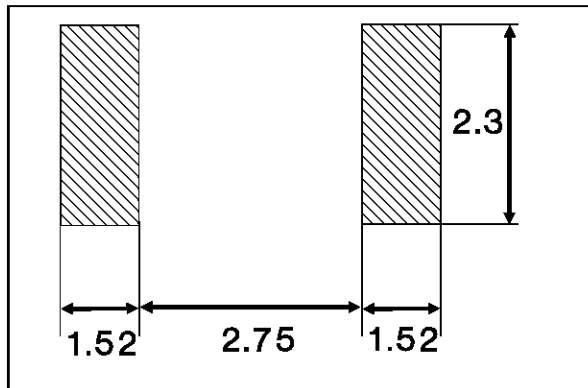
PACKAGE MECHANICAL DATA

SOD 6 (Plastic)



FOOTPRINT DIMENSIONS (in millimeters)

SOD6 (Plastic)



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