

0.5A,1500V High Voltage Rectifier

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



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Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)			
Parameter	Symbol	FR15	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	1500	V
Maximum RMS voltage	V _{RMS}	1050	V
Maximum DC blocking voltage	V _{DC}	1500	V
Maximum average forward rectified current	I _{F(AV)}	0.5	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	15	A
Operating junction temperature range	T _J	-55 to +135	°C
Storage temperature range	T _{STG}	-55 to +135	°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	72	°C / W
Thermal Resistance, Junction to Case	R _{θJC}	14	°C / W
Thermal Resistance, Junction to Lead	R _{θJL}	13	°C / W

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	FR15	Unit
Forward Drop Voltage	V_F	$I_F=0.5\text{A}$	1.50	V
Reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	10	μA
Typical junction capacitance	C_J	4.0 V 1 MHz	15	pF
Maximum reverse recovery time	t_{rr}	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$	500	nS

Note:

- Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1-Typ FORWARD SURGE CURRENT

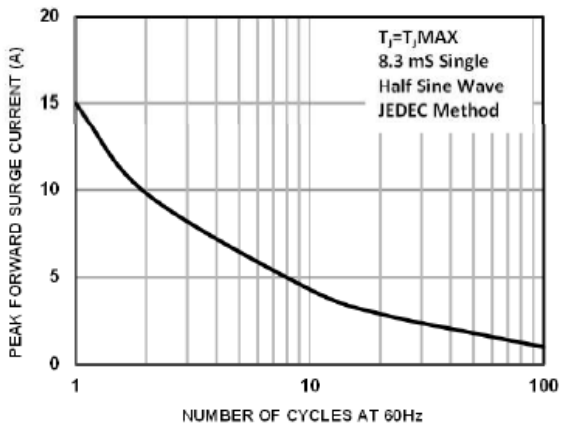


FIG.2-FORWARD CURRENT DERATING CURVE

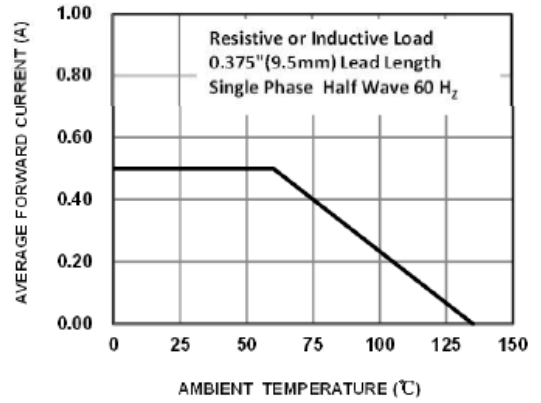


FIG.3-Typ INSTANTANEOUS FORWARD CHARACTERISTICS

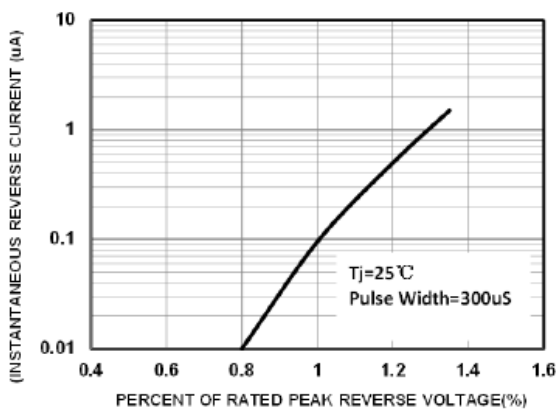
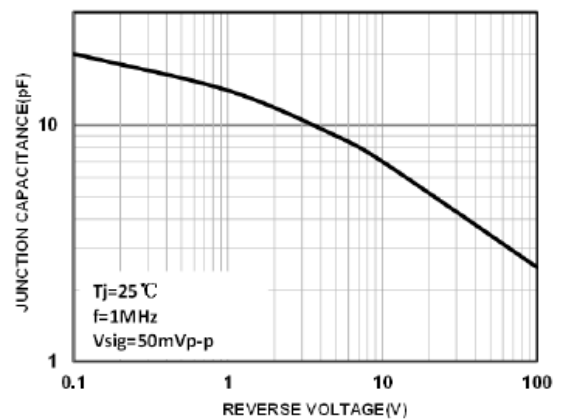
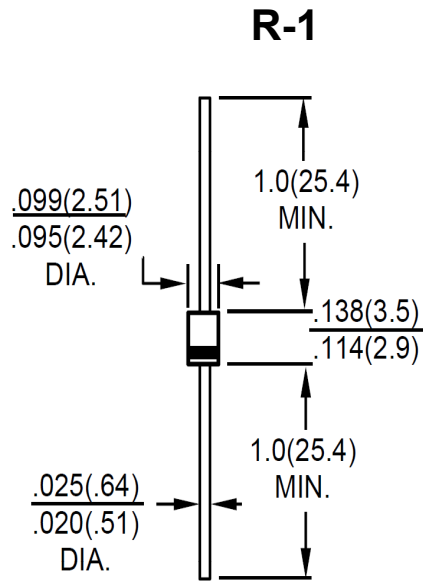


FIG.4-Typ JUNCTION CAPACITANCE



Package Outline Dimensions

in inches (millimeters)



Dimensions in inches and (millimeters)

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.12.05	Modify document format

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