

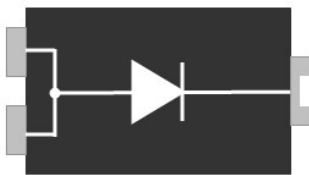
FEATURES

- ✧ High current capability, low forward voltage
- ✧ Excellent high temperature stability
- ✧ Low power loss, and high efficiency
- ✧ High forward surge capability
- ✧ RoHS compliant, and Halogen free

ORDERING INFORMATION

- ✧ Device:SD12U120SL
- ✧ Package: TO-277
- ✧ Material: Halogen free
- ✧ Packing: Tape & 13" Reel
- ✧ Quantity per reel:
5,000pcs

PIN CONFIGURATION



MACHANICAL DATA

- ✧ Case: TO-277 small outline plastic package
- ✧ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧ Molding Compound Flammability Rating:UL94-0
- ✧ High temperature soldering guaranteed:
260°C /10second
- ✧ Packed with FRP substrate and epoxy underfilled

APPLICATIONS

- ✧ Switching mode power supply applications
- ✧ Portable equipment battery applications
- ✧ High frequency rectification
- ✧ DC/DC converter
- ✧ Designed as bypass diodes for solar panels

ACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING ($T_{amb}=25^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{RRM} V_{RWM} V_{DC}	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC blocking voltage	120	V
$V_{R(RMS)}$	RMS Rectified Voltage	84	V
$I_{F(AV)}$	Average Forward Current	12	A
I_{FSM}	Peak Forward Surge Current, 8.3ms single half sine-wave	200	A
$R_{\theta JA}$ $R_{\theta JL}$	Typical Thermal Resistance Junction to Ambient	110 3.0	$^{\circ}\text{C}/\text{W}$
T_J & T_{STG}	Junction and Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_F	Forward Voltage	$I_F = 12\text{A} @ 25^{\circ}\text{C}$		0.74	0.81	V
I_R	Reverse Leakage Current	@ 25°C		0.02	0.05	mA
		@ 100°C		10		mA

ELECTRICAL CHARACTERISTICS CURVE

Fig.1 - Forward Current Derating Curve

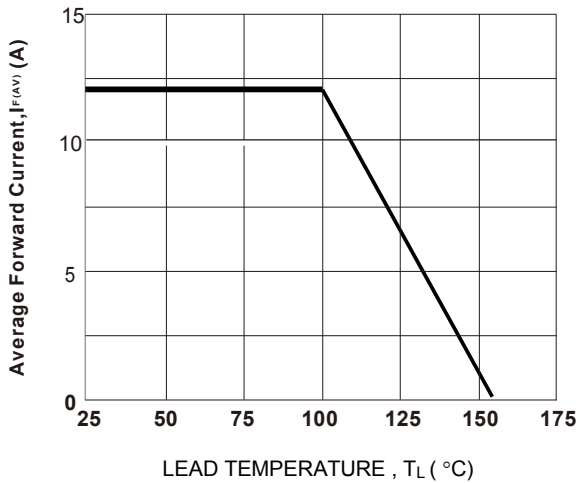


Fig. 2 Typical Forward Characteristics (per leg)

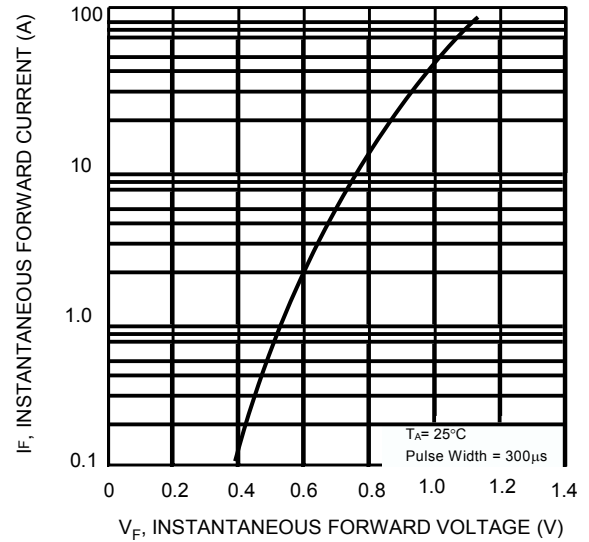


Fig. 3 Maximum Peak Forward Surge Current (per leg)

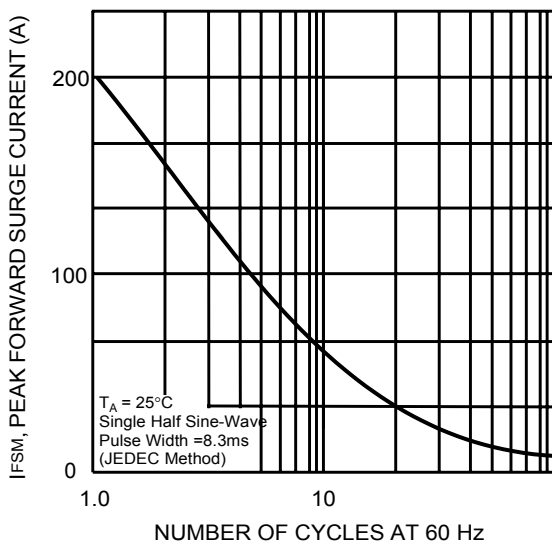
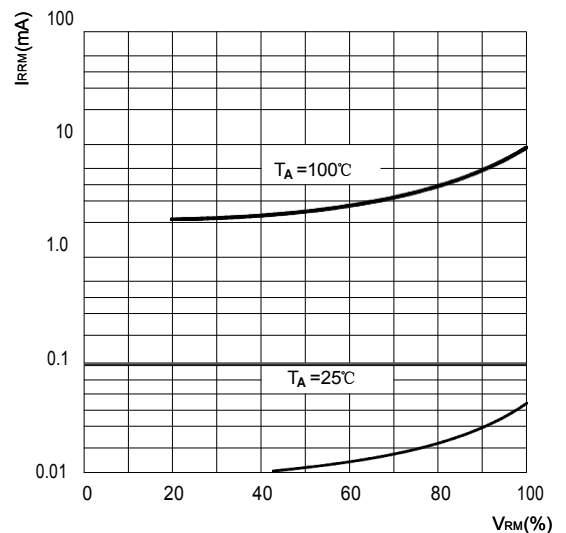
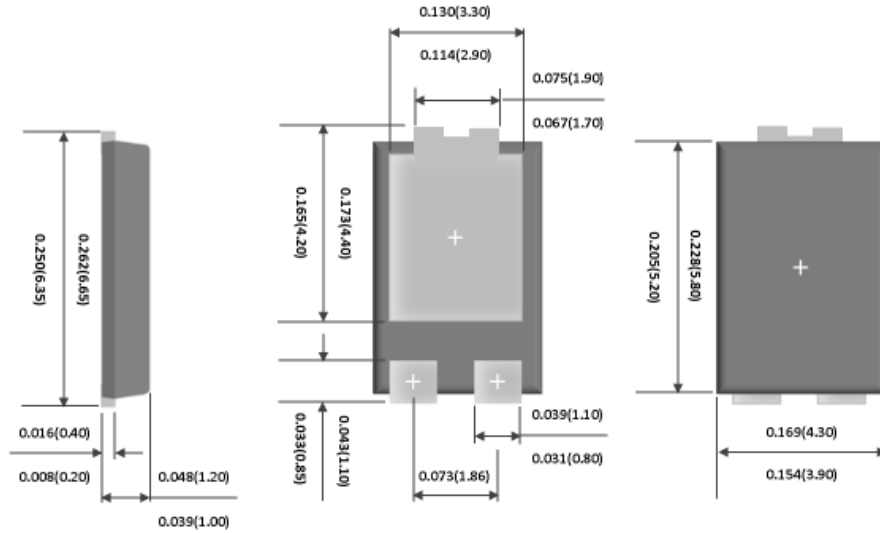


Fig4: Typical Reverse Characteristics

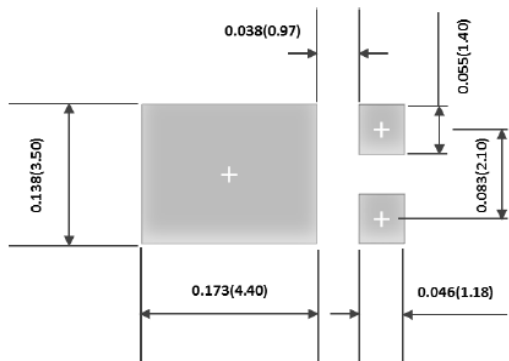


TO-277 PACKAGE OUTLINE DIMENSIONS



unit: mm

FOOT PRINT RECOMMENDATION



unit: mm

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG
TO-277	5000/REEL	80000	41X38X36	12.00