

## 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

## 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

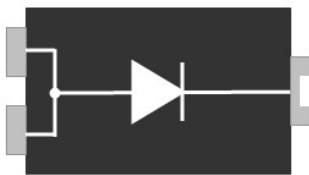
## ORDERING INFORMATION

- ◇ Device:ST5100L
- ◇ Package: TO-277
- ◇ Material: Halogen free
- ◇ Packing: Tape & 13" Reel
- ◇ Quantity per reel: 5,000pcs

## APPLICATIONS

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

## PIN CONFIGURATION



## ACKAGE OUTLINE



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

Symbol	Parameter	Value	Units
$V_{RRM}$ $V_{RWM}$ $V_{DC}$	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC blocking voltage	100	V
$V_{R(RMS)}$	RMS Rectified Voltage	70	V
$I_{F(AV)}$	Average Forward Current	5	A
$I_{FSM}$	Peak Forward Surge Current, 8.3ms single half sine-wave	80	A
$R_{\theta JA}$ $R_{\theta JL}$	Typical Thermal Resistance Junction to Ambient	60 3	$^{\circ}C/W$
$T_J$ & $T_{STG}$	Junction and Storage Temperature	-55~+150	$^{\circ}C$

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

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_F$	Forward Voltage	$I_F = 5A @ 25^{\circ}C$		0.65	0.75	V
$I_R$	Reverse Leakage Current	@ $25^{\circ}C$		10	50	$\mu A$
		@ $125^{\circ}C$		1.5	20	mA
CJ	Typical junction capacitance	4V, 1MHz			370	pF

## ELECTRICAL CHARACTERISTICS CURVE

Figure 1: Forward Current vs. Forward Voltage

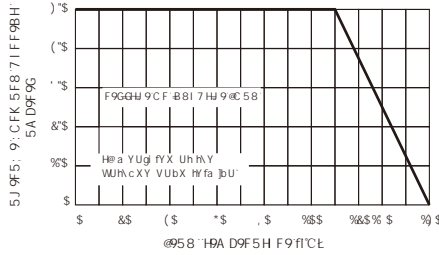


Figure 2: Reverse Current vs. Reverse Voltage

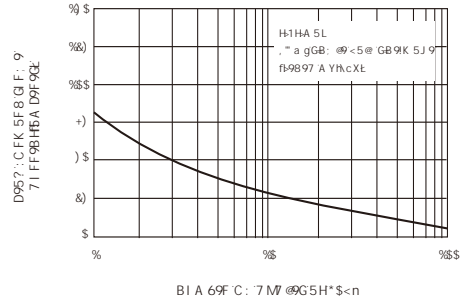


Figure 3: Average Forward Current vs. Forward Voltage

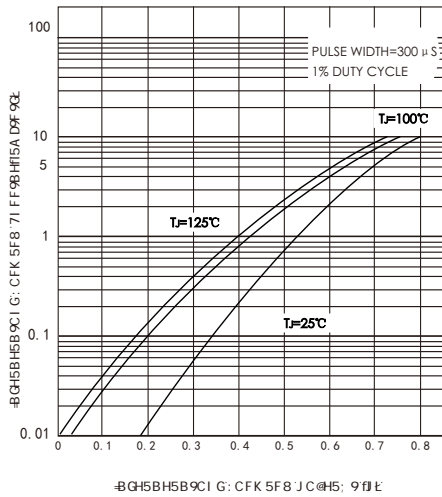


Figure 4: Instantaneous Reverse Current vs. Percent of Rated Peak Reverse Voltage

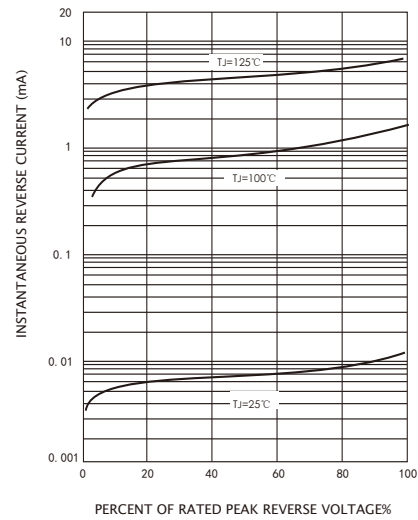
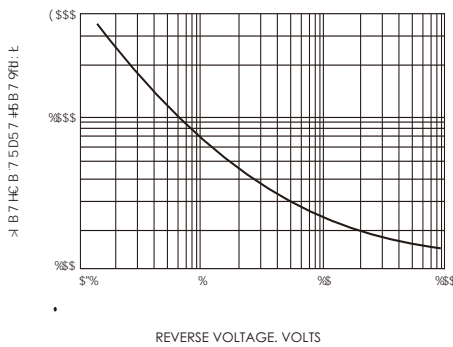
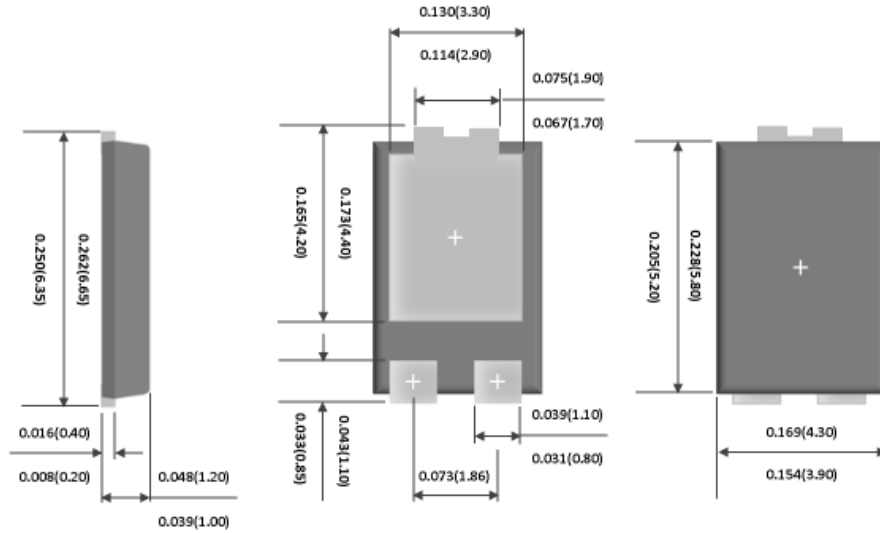


Figure 5: Reverse Leakage Current vs. Reverse Voltage

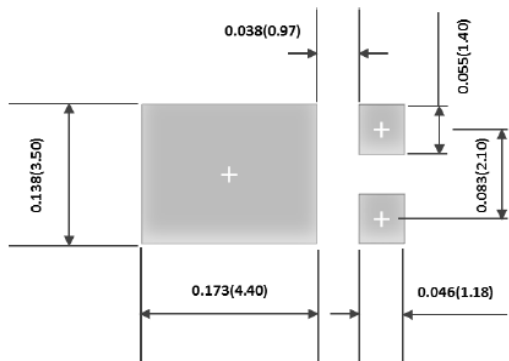


## TO-277 PACKAGE OUTLINE DIMENSIONS



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

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