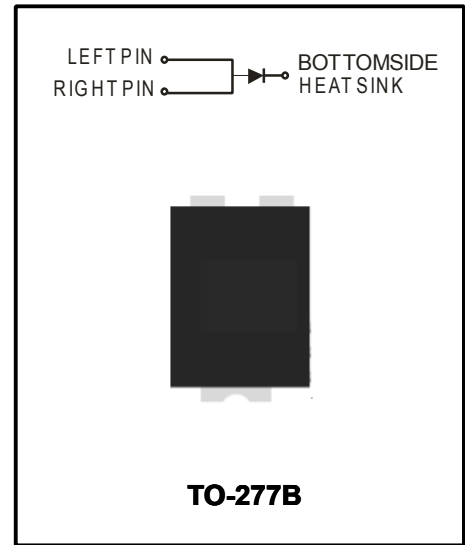


### Features

- Low forward voltage drop(VF) low power losses
- Excellent higher temperatures characteristics
- Thermally efficient package for cooler running applications
- Lead-Free Finish; RoHS Compliant
- Halogen and antimony free."Green" device

### General Description

Packaged in the compact thermally efficient TO-277B Package, the WSC15U50 has very low VF and at high temperatures. provides excellent reverse leakage stability . It is ideal product for rectification, freewheeling or polarity protection diode.



### Applications

- DC / DC Converters
- AC/ DC Adaptors

### Absolute Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

Symbol	Parameter	Value	Units
$V_{RRM}$	Repetitive peak reverse voltage	50	V
$I_{F(AV)}$	Average forward current	15	A
$I_{FSM}$	Surge non repetitive forward current (8.3ms single half sine-wave)	260	A
$T_J$	Junction Temperature	-65~150	°C
$T_{stg}$	Storage Temperature	-65~150	°C

### Thermal Characteristics

Symbol	Parameter	Value	Units
Typical Thermal Resistance(note 1)	$R_{\theta JA}$	98	°C/W
Typical Thermal Resistance(note 2)	$R_{\theta JA}$	40	°C/W
Typical Thermal Resistance(note 3)	$R_{\theta JM}$	4.1	°C/W

- Notes:1.FR-4 ,2oz.Copper,minimum recommended pad layout per  
 2.FR-4 ,2oz.Copper, Cathode pad dimensions 18.8mm×14.4mm.Anode pad dimensions 5.6mm×14.4  
 3.Junction to mount (Cathode Terminal)  
 4.Short duration pulse test used to minimize self-heating effect.

### Electrical Characteristics (Rating at 25°C ambient temperature unless otherwise specified)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse leakage current(Note 4)	$I_R$	$V_R = 50V, T_J = 25^\circ C$	-	-	0.5	mA
		$V_R = 50V, T_J = 125^\circ C$	-	50	-	
Forward voltage drop	$V_F$	$I_F = 10A, T_J = 25^\circ C$	-	-	0.48	V
		$I_F = 10A, T_J = 125^\circ C$	-	0.33	-	V
		$I_F = 15A, T_J = 25^\circ C$	-	0.44	0.52	V
		$I_F = 15A, T_J = 125^\circ C$	-	0.40	-	V
Junction Capacitance	$C_J$	$V_R = 25V, T_J = 25^\circ C$	-	380	-	pF

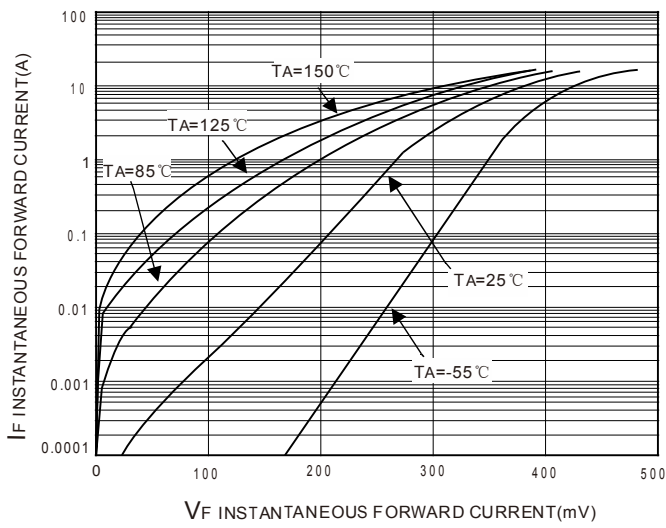


Fig.1 Typical Forward Characteristics

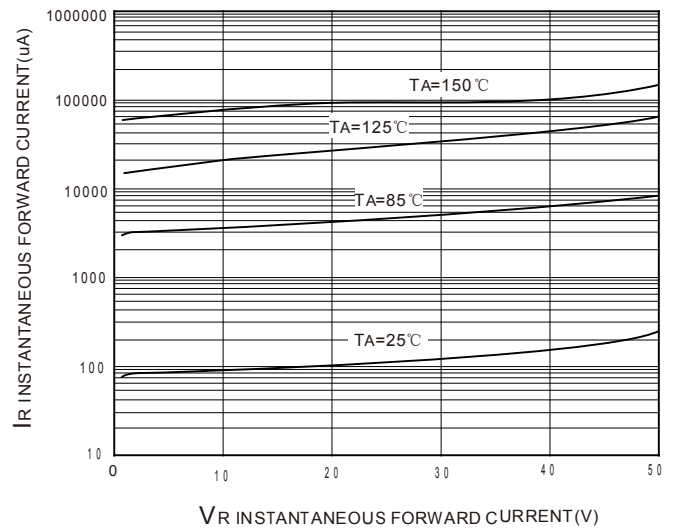


Fig.2 Typical Reverse Characteristics

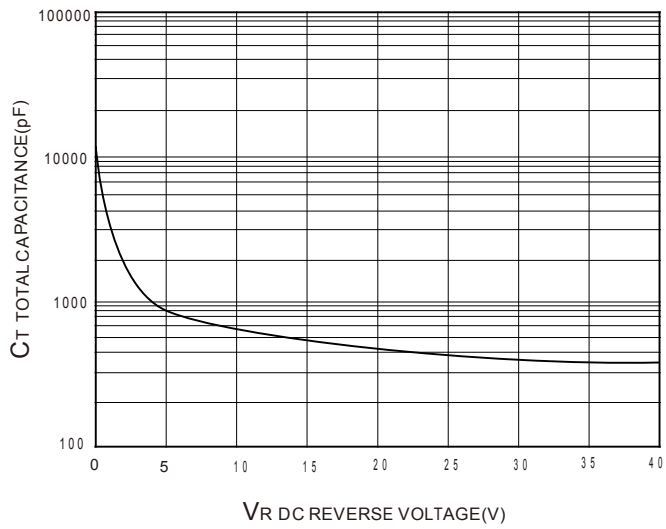


Fig.3 Total Capacitance vs. Reverse Voltage

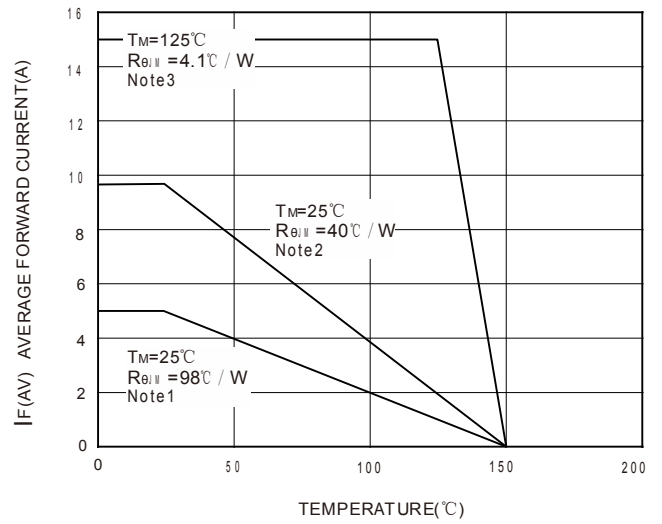
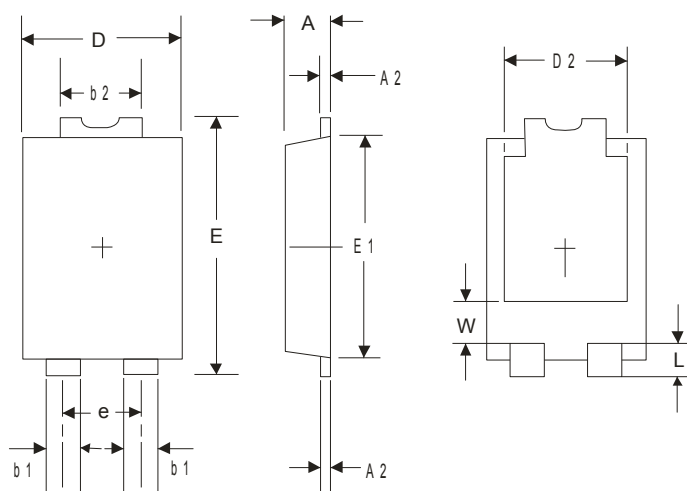


Fig.4 Forward Current Derating Curve

## TO-277B Package Dimension

Unit:mm



符号 Symbol	MIN	MAX
A	1.0	1.2
A 2	0.2	0.4
b 1	0.8	1.1
b 2	2.9	3.3
D	3.9	4.3
D 2	2.9	3.3
E	6.35	6.65
E 1	5.2	5.8
e	1.86(TYP.)	
L	0.85	1.1

**NOTE:**

- 1.We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
- 2.Please do not exceed the absolute maximum ratings of the device when circuit designing.
- 3.Winsemi Microelectronics Co., Ltd reserved the right to make changes in this specification sheet and is subject to change without prior notice.

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