

**Trench MOS Barrier Schottky Rectifier**

**Reverse Voltage - 100 V**

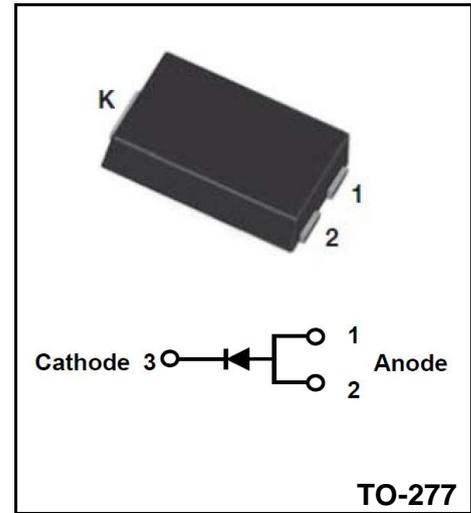
**Forward Current - 12 A**

**FEATURES**

- ◆ Advanced trench technology
- ◆ Low forward voltage drop
- ◆ Low power losses
- ◆ High efficiency operation
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: TO-277
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026



**Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified**

Parameter		Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	100	V
Maximum RMS voltage		$V_{RMS}$	70	V
Maximum DC Blocking Voltage		$V_{DC}$	100	V
Maximum Average Forward Rectified Current	Per diode	$I_{F(AV)}$	12	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode		$I_{FSM}$	200	A
Operating Temperature Range		$T_J$	-55 ~ +150	°C
Storage Temperature Range		$T_{STG}$	-55 ~ +150	°C
Typical Thermal Resistance Per diode(munted on FR-4 PCB)	TO-277	$R_{\theta JC}$	72	°C/W

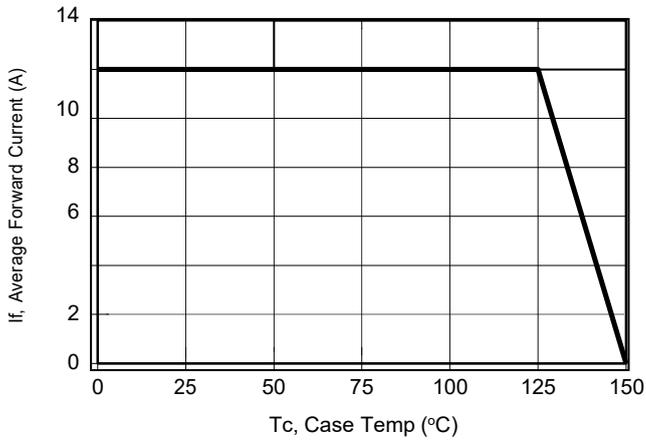
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

**Electrical Characteristics (Per Leg) unless otherwise specified**

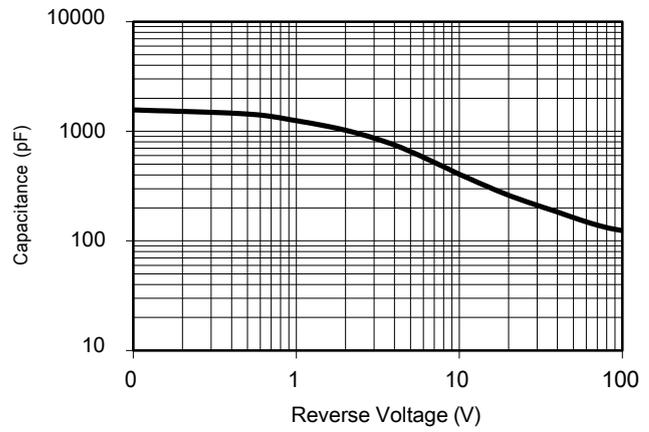
Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		$V_F$	Typ	Max	V
at $I_F=3A$ Instantaneous forward voltage per diode	TA=25°C		0.43	-	
	TA=125°C		0.36	-	
at $I_F=12A$ Instantaneous forward voltage per diode	TA=25°C		0.64	0.66	
	TA=125°C	0.59	0.65		
Instantaneous reverse current per diode at rated reverse voltage	TA=25°C	$I_R$	20	80	uA
	TA=125°C		-	20	mA

Note2: (1)Pulse test: 300 μs pulse width, 1 % duty cycle  
(2) Pulse test: Pulse width ≦ 40 ms

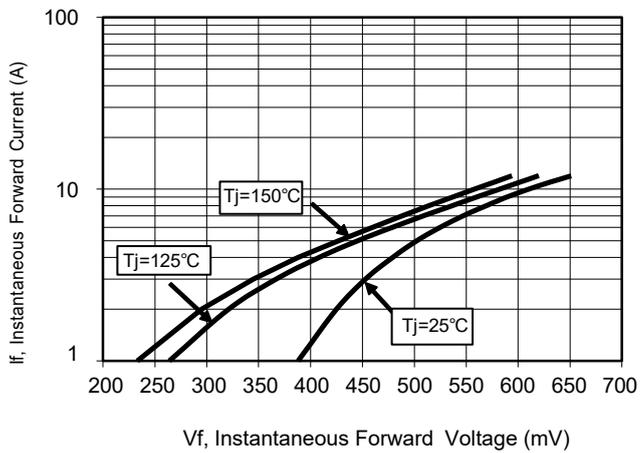
**RATINGS AND CHARACTERISTIC CURVES**



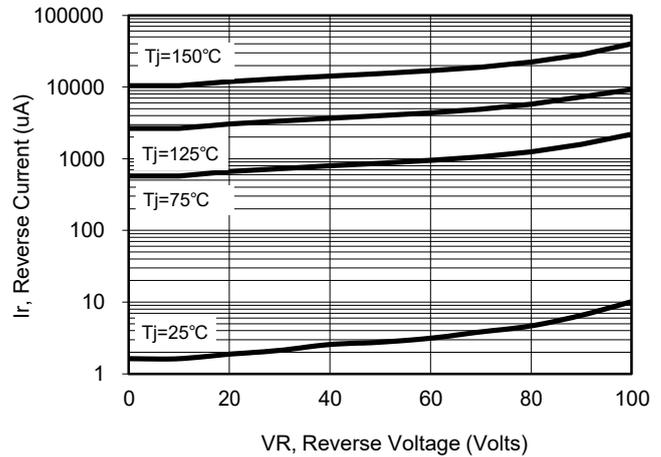
Current Derating, Case



Typical Junction Capacitance

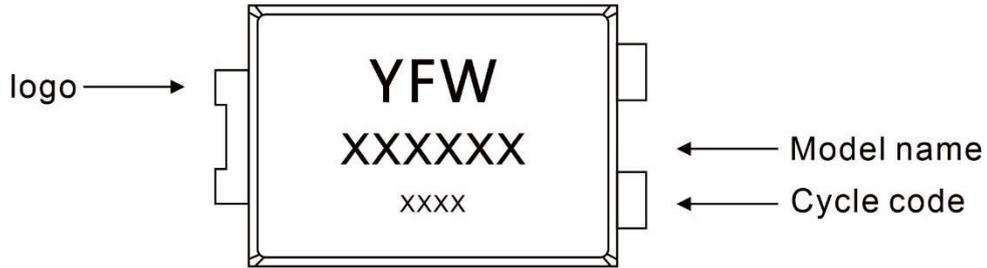


Typical Forward Voltage



Typical Reverse Current

Marking Diagram



Ordering information

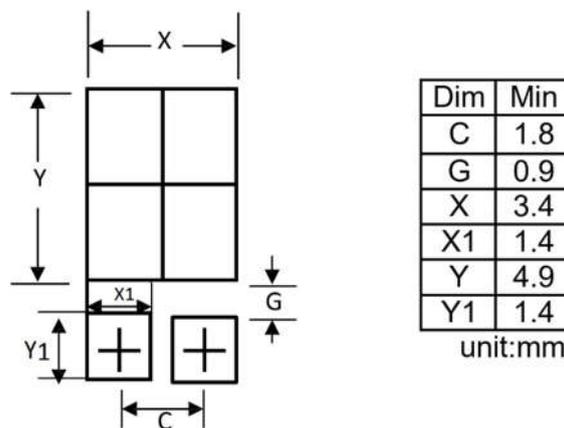
Package	Packing Description	Packing Quantity
TO-277	Tape/Reel, 13"reel	5000PCS/Reel 50000PCS/Carton

Package Dimensions

TO-277

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	1.1	1.2	43	47
A2	0.3	0.4	12	16
b1	0.8	1	32	39
b2	1.7	1.9	67	75
D	3.9	4.1	154	162
D1	3.054		120	
E	6.4	6.6	252	260
e	1.84		73	
E1	5.3	5.5	209	217
E2	3.549		140	
L	0.8	1	32	39
L1	0.5	0.7	20	28
W	1.1	1.4	43	55

The recommended mounting pad size



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