

Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 45 V

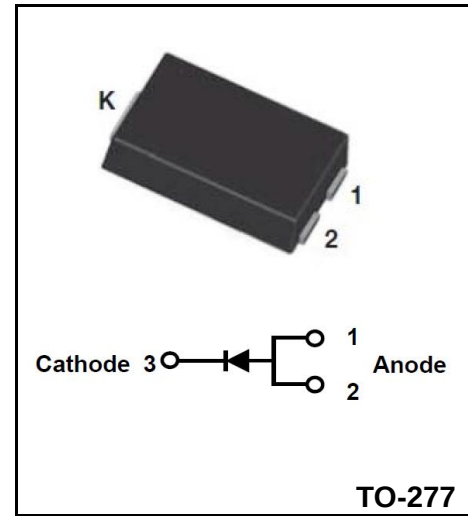
Forward Current - 10 A

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}	45	V
Maximum RMS voltage		V_{RMS}	31.5	V
Maximum DC Blocking Voltage		V_{DC}	45	V
Maximum Average Forward Rectified Current	Per diode	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode		I_{FSM}	120	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.

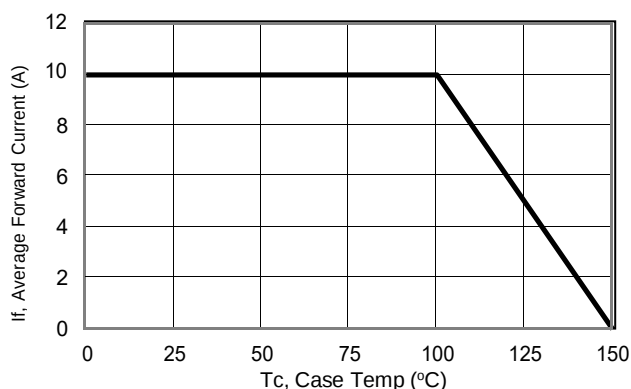
Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V_F	Typ	Max	V
at $I_F=2A$ Instantaneous forward voltage per diode	TA=25°C		0.41	-	
	TA=125°C		0.29	-	
at $I_F=10A$ Instantaneous forward voltage per diode	TA=25°C		0.52	0.55	
	TA=125°C		0.40	-	
Instantaneous reverse current per diode at rated reverse voltage	TA=25°C	I_R	5	50	uA
	TA=125°C		-	10	mA

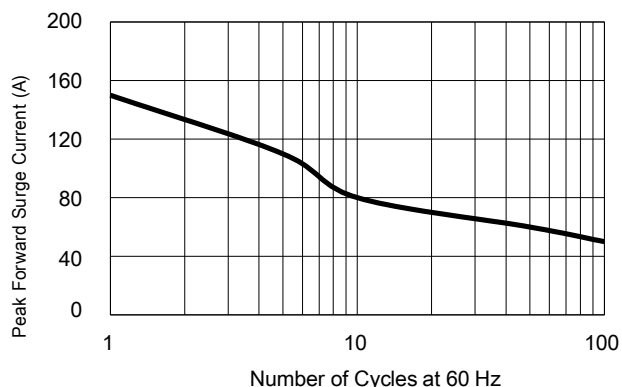
Note2: (1)Pulse test: 300 μ s pulse width, 1 % duty cycle

(2) Pulse test: Pulse width $\leq$ 40 ms

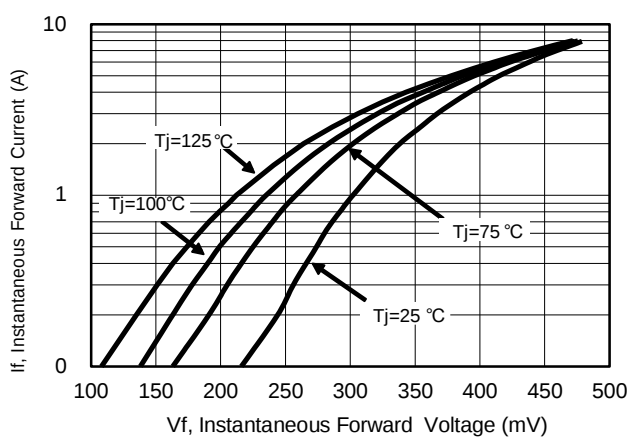
RATINGS AND CHARACTERISTIC CURVES



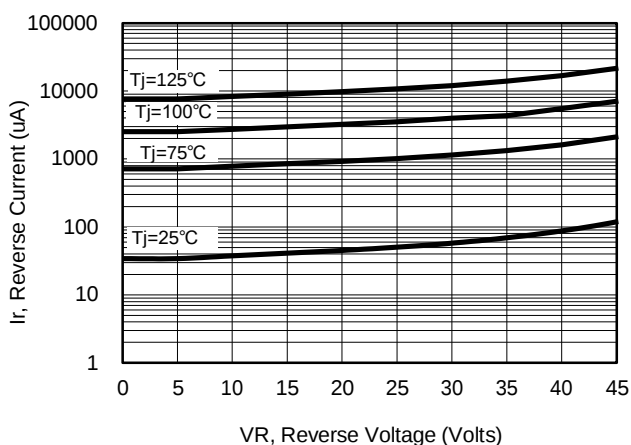
Current Derating, Case



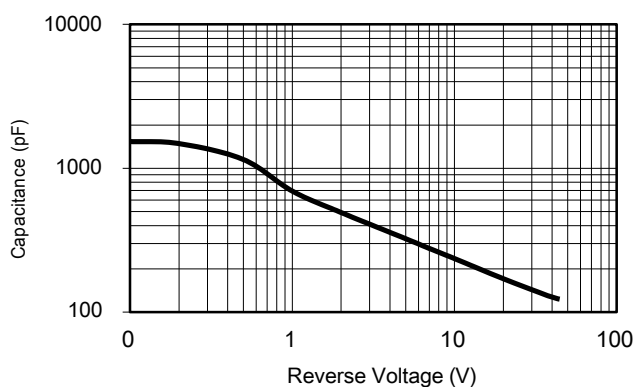
Maximum Repetitive Surge Current



Typical Forward Voltage

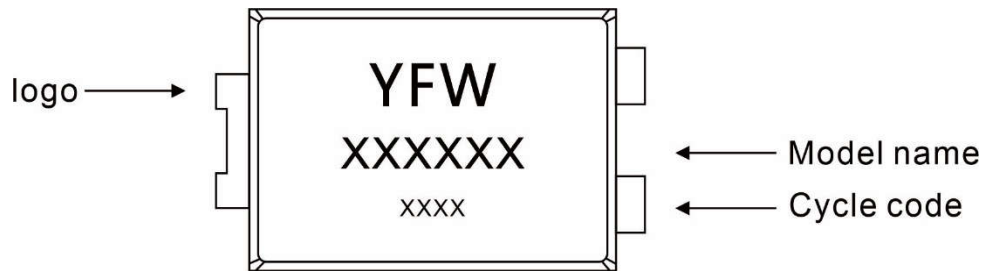


Typical Reverse Current



Typical Junction Capacitance

Marking Diagram



Ordering information

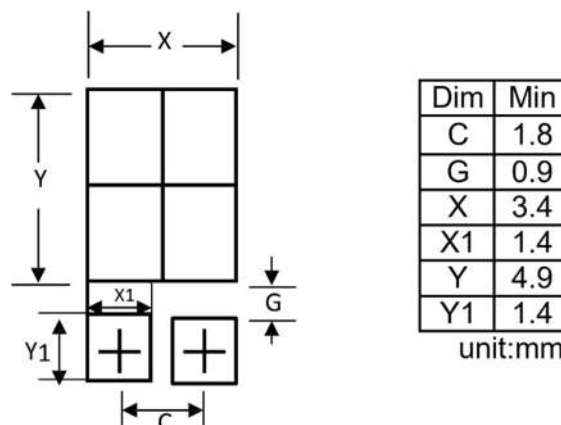
Package	Packing Description	Packing Quantity
TO-277	Tape/Reel, 13"reel	5000PCS/Reel 50000PCS/Carton

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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