

Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 60 V

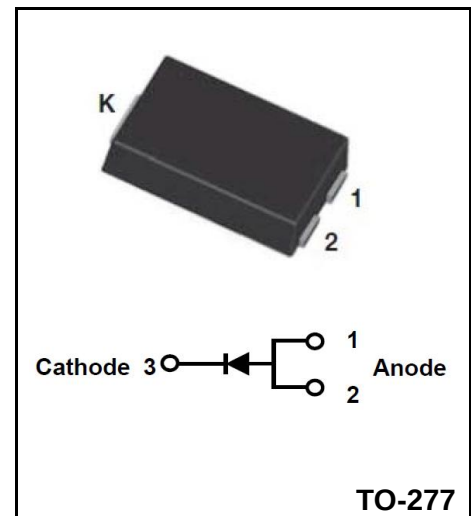
Forward Current - 10 A

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}	60	V
Maximum RMS voltage		V_{RMS}	42	V
Maximum DC Blocking Voltage		V_{DC}	60	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}	260	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.

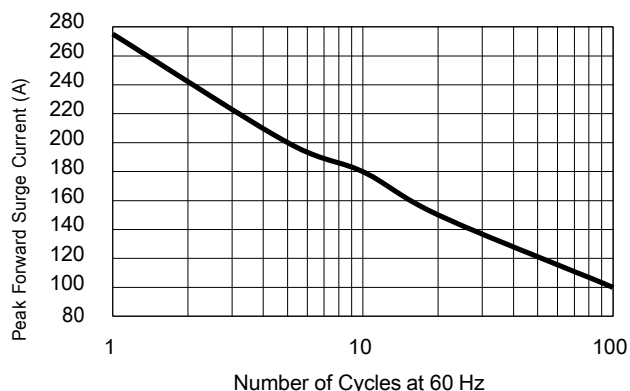
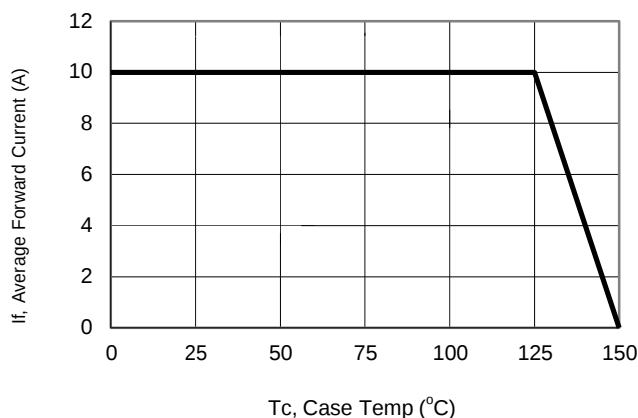
Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V_F	Typ	Max	V
at $I_F=5A$ Instantaneous forward voltage per diode	TA=25°C		0.40	-	
	TA=125°C		0.36	-	
at $I_F=10A$ Instantaneous forward voltage per diode	TA=25°C		0.47	0.55	
	TA=125°C		0.42	-	
Instantaneous reverse current per diode at rated reverse voltage	TA=25°C	I_R	60	100	uA
	TA=125°C		-	20	mA

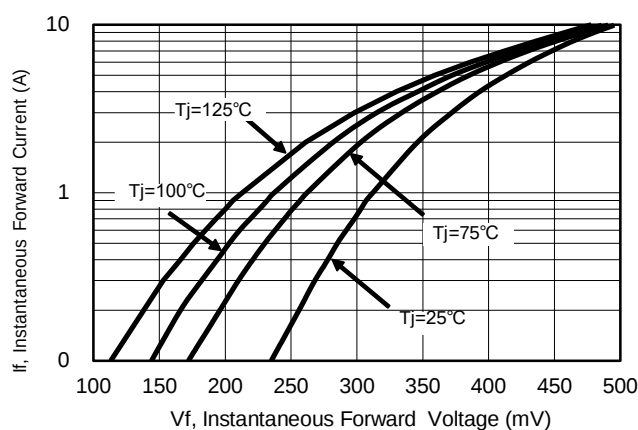
Note2: (1)Pulse test: 300 μs pulse width, 1 % duty cycle

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

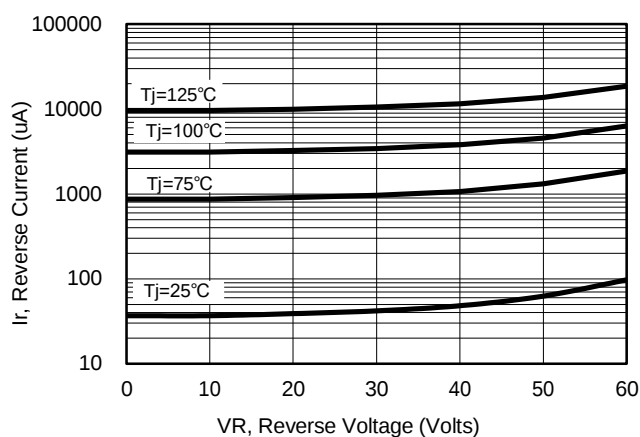
RATINGS AND CHARACTERISTIC CURVES



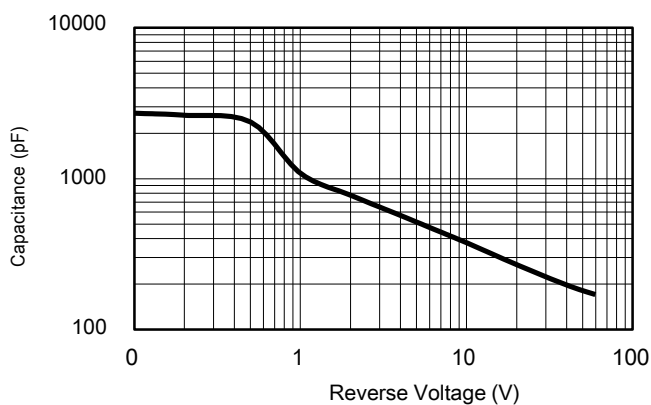
Current Derating, Case



Maximum Repetitive Surge Current



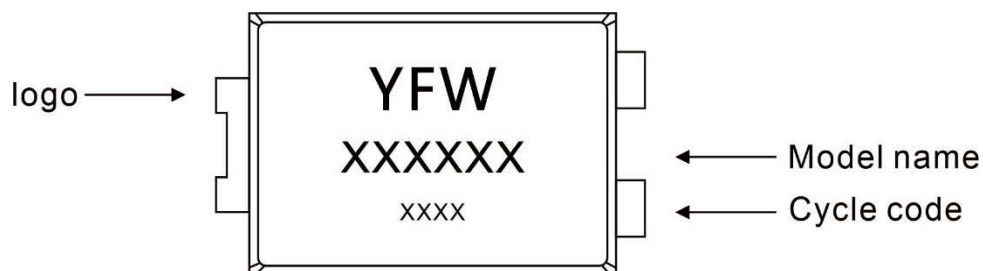
Typical Forward Voltage



Typical Reverse Current

Typical Junction Capacitance

Marking Diagram



Ordering information

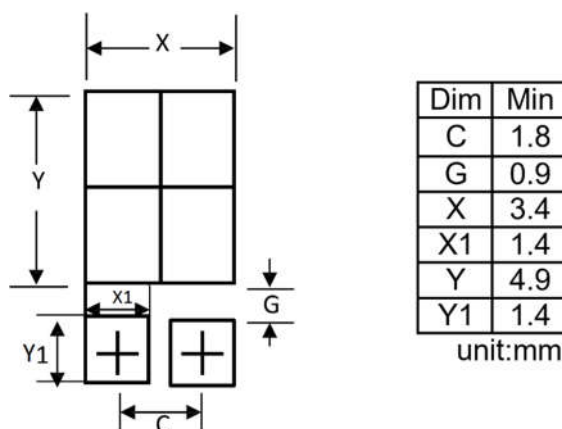
Package	Packing Description	Packing Quantity
TO-277	Tape/Reel, 13" reel	5000PCS/Reel 50000PCS/Cartron

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



Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.