

Superfast Recovery Rectifier

Reverse Voltage - 600 V

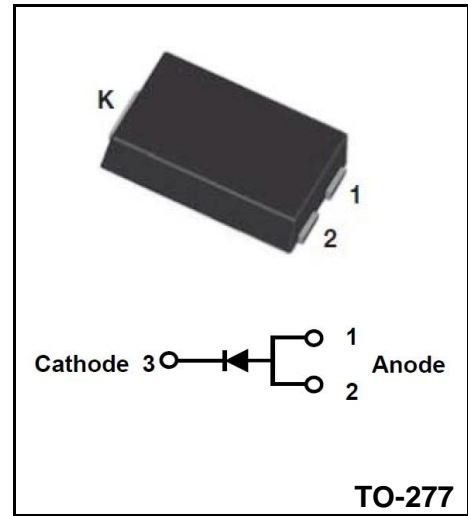
Forward Current - 8 A

FEATURES

- ◆ For surface mounted applications
- ◆ Ideal for automated placement
- ◆ High forward surge current capability
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ High temperature soldering guaranteed 260°C/10 seconds at terminals

APPLICATION

For use in super fast switching rectification of power suppliers, inverters, converters, and freewheeling diodes for consumer and telecommunication



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

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current at $T_c=100^\circ C$	Per diode $I_{F(AV)}$	8	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave superimposed on rated load per diode	I_{FSM}	175	A
Typical junction capacitance (Note1)	C_J	42	pF
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 $R_{\theta JA}$ $R_{\theta JC}$	60 8	°C/W

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics	Symbols	Value		Units
		Typ	Max	
Forward Voltage Drop	V_F	1.42	1.7	V
at $I_F=8.0A$ Instantaneous forward voltage per diode				
$T_A=25^\circ C$ $T_A=125^\circ C$				
Maximum DC reverse current at rated DC blocking voltage	I_R	0.1	2	uA
$T_A=25^\circ C$ $T_A=125^\circ C$		10	100	
Maximum reverse recovery time	T_{rr}	30	35	NS

Note:

1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B.with 0.3" x0.3" (8.0 mm x 8.0 mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

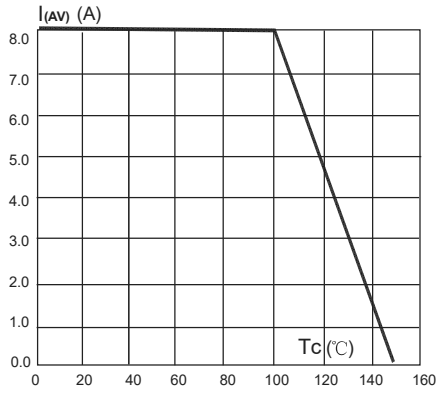


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

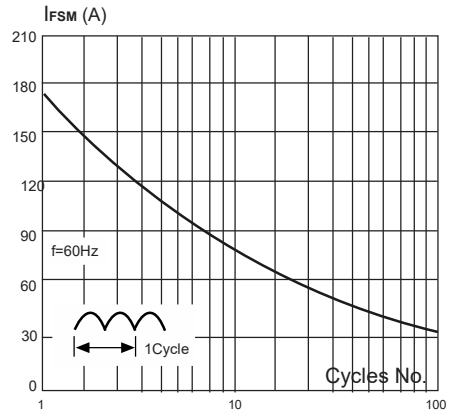


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

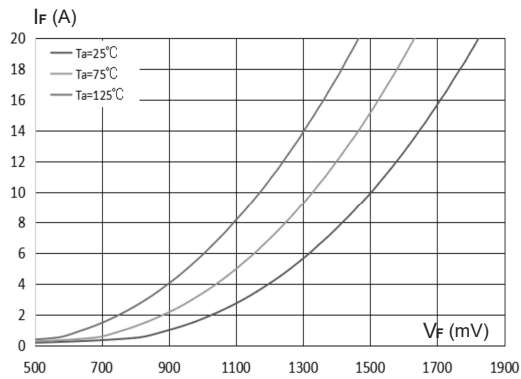
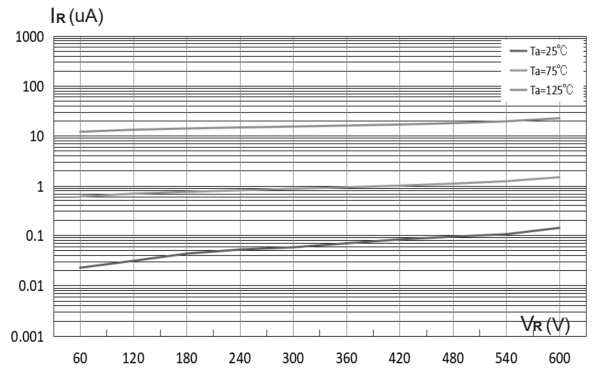
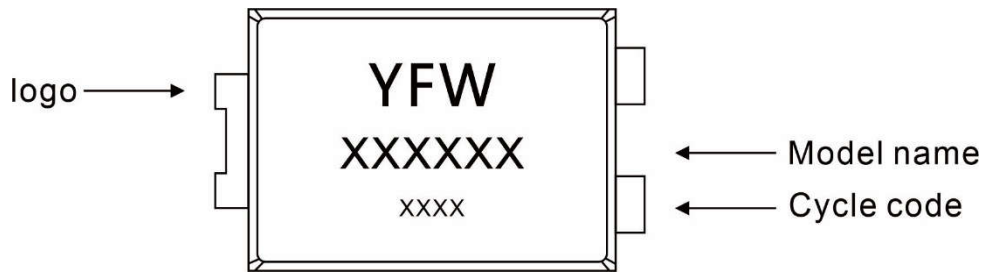


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Marking Diagram



Ordering information

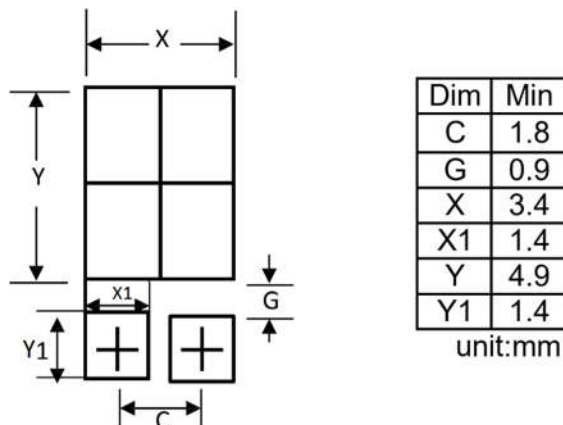
Package	Packing Description	Packing Quantity
TO-277	Tape/Reel, 13" reel	5000PCS/Reel 50000PCS/Carton

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



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.