

SIC SCHOTTKY BARRIER DIODE

Reverse Voltage - 1200 V

Forward Current - 30 A

FEATURES

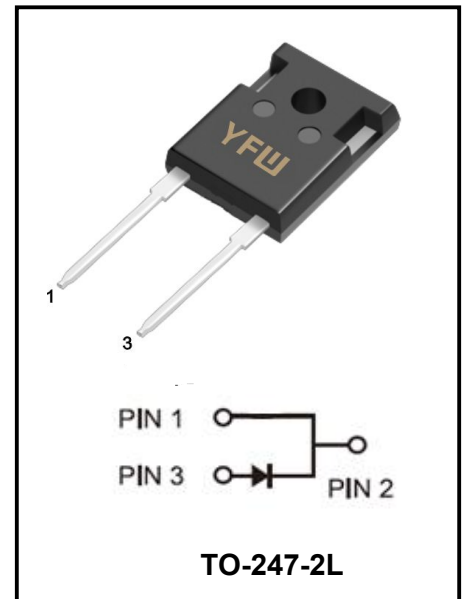
- ◆ Negligible reverse recovery
- ◆ High surge current
- ◆ Positive temperature coefficient
- ◆ Higher frequency
- ◆ Halogen-free / RoHS compliant

TYPICAL APPLICATIONS

- ◆ SMPS
- ◆ Solar inverter
- ◆ Data Center
- ◆ UPS

BENEFITS

- ◆ High-speed switching
- ◆ Low heat dissipation requirements
- ◆ Reduce size and cost of the system
- ◆ High-reliability



Maximum Ratings at Ta=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Maximum Average Forward Rectified Current	I_F	78	A
Maximum Average Forward Rectified Current		49	A
Maximum Average Forward Rectified Current		30	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	270	A
Operating Temperature Range	T_J	175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	0.41	°C/W

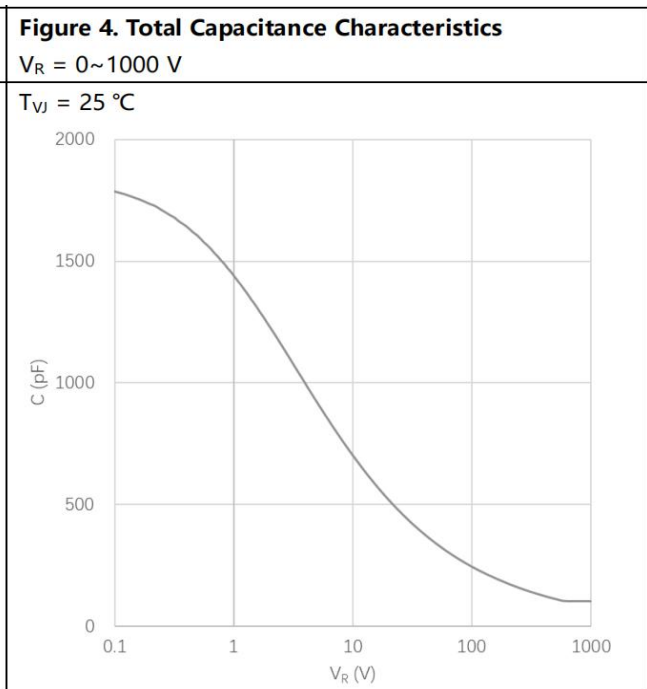
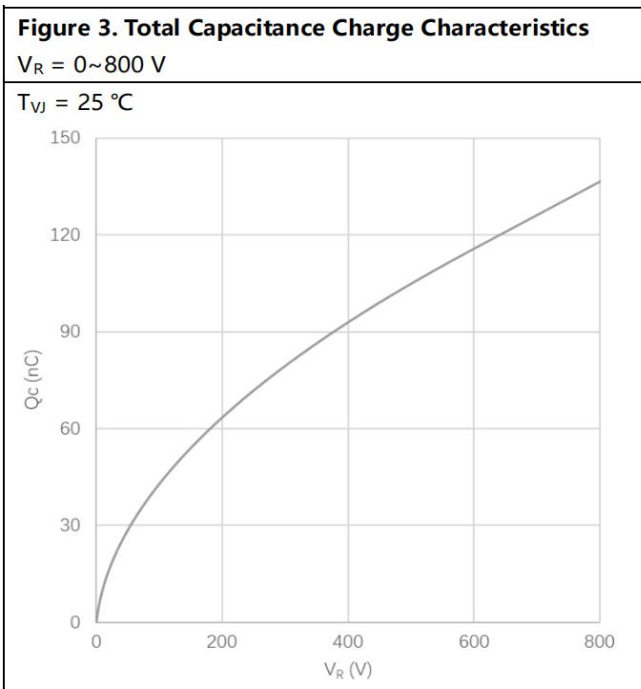
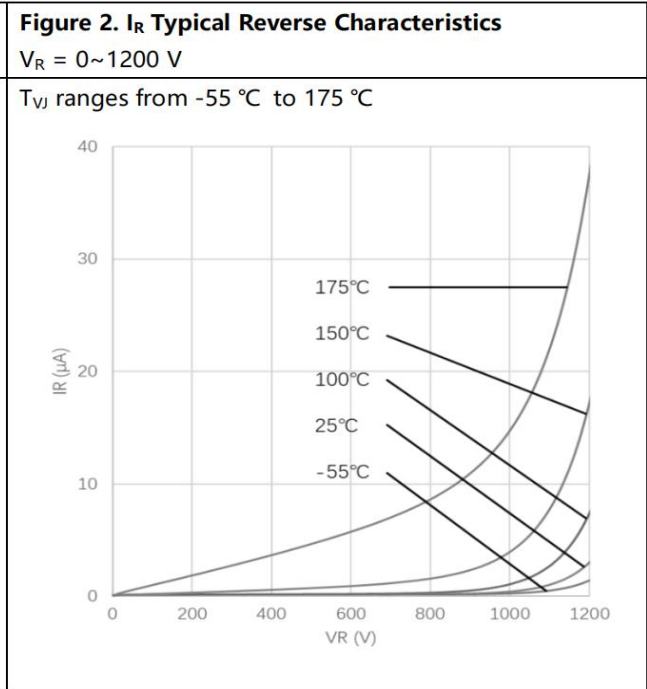
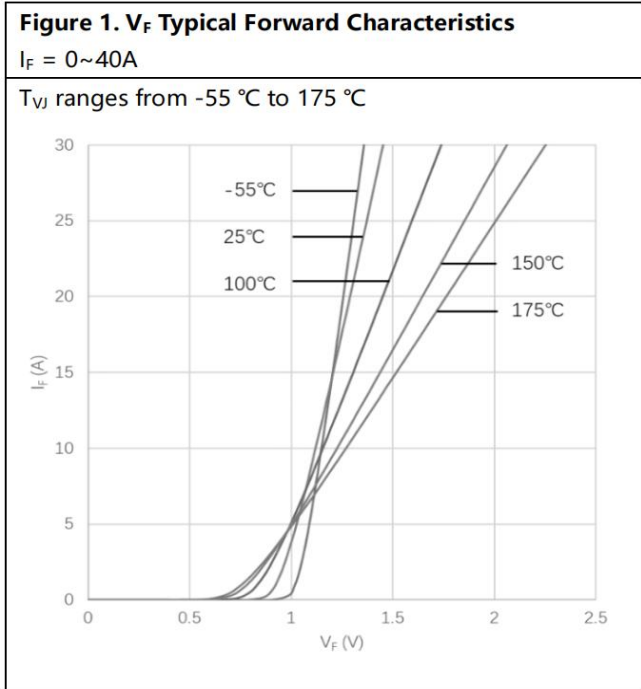
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics unless otherwise specified

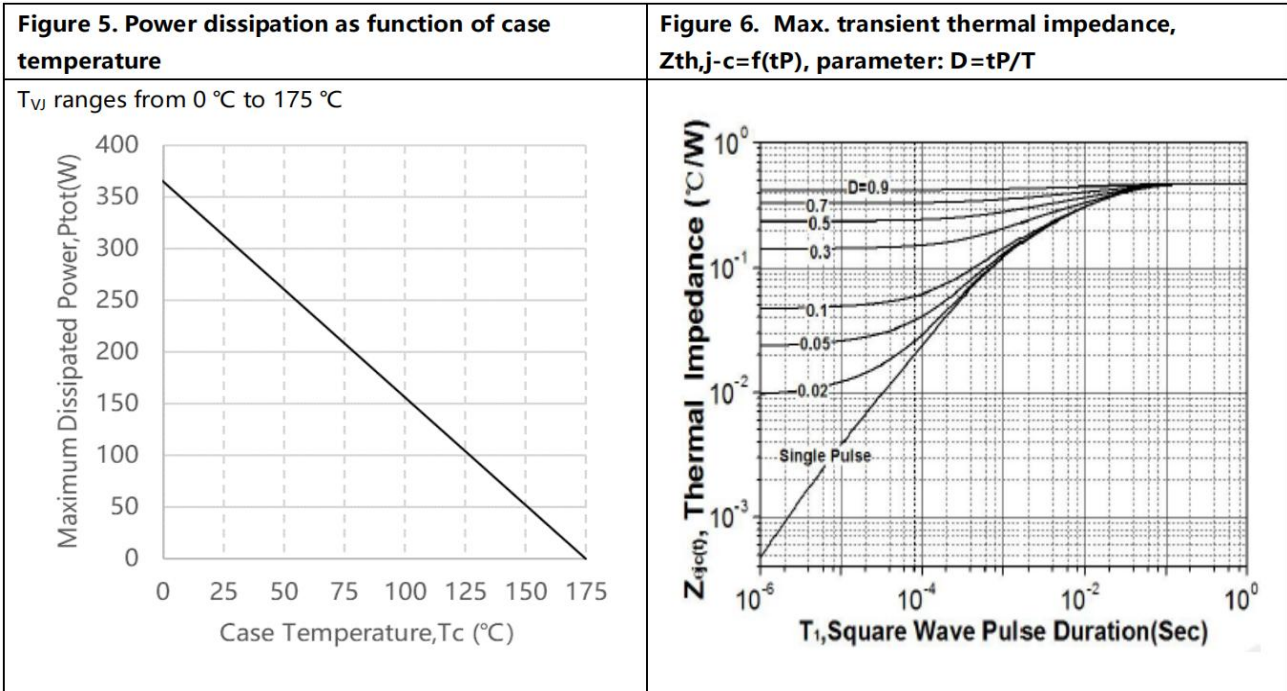
Parameter		Symbol	Value			Unit
			Min	Typ	Max	
Forward Voltage Drop(Note2)		V_{DC}	-	1200	-	V
$I_R = 100\mu A$						
at $I_F=30A$	$T_A=25^\circ C$	V_F	-	1.45	1.7	V
	$T_A=175^\circ C$		-	2.25	-	
Maximum Reverse Current at $V_R=1200V$	$T_A=25^\circ C$	I_R	-	5	200	μA
	$T_A=175^\circ C$		-	50	-	
Total capacitive charge	$V_R = 800V$	Q_C	-	137	-	nC
Total capacitance	$V_R = 1V, f = 1MHz$	C	-	1440	-	pF
	$V_R = 400V, f = 1MHz$		-	126	-	
	$V_R = 800V, f = 1MHz$		-	104	-	
Capacitance stored energy	$V_R = 800V$	E_C	-	40	-	μJ

Note:Pulse test: 300 μs pulse width, 1 % duty cycle

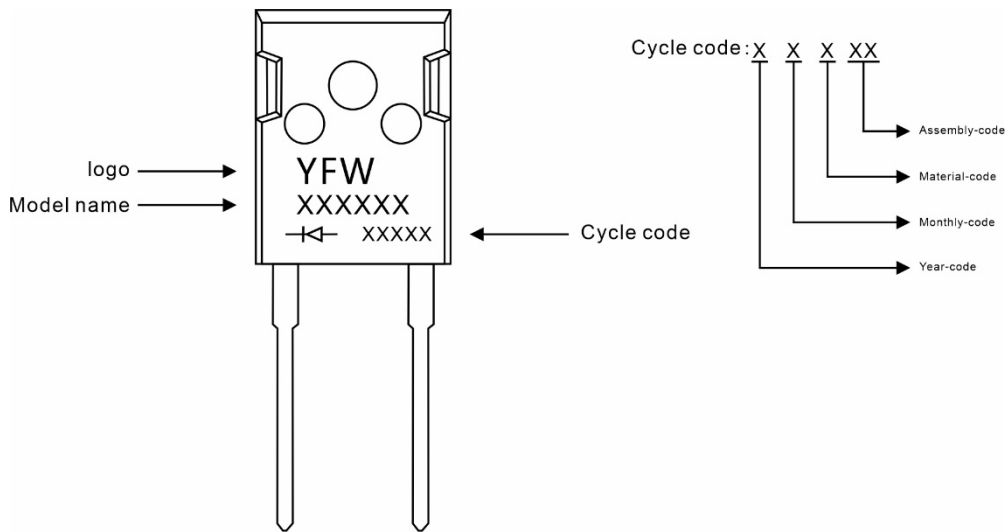
RATINGS AND CHARACTERISTIC CURVES



RATINGS AND CHARACTERISTIC CURVES



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
YFWD330120W	TO-247-2L	0.209oz(5.93g)	30pcs/tube	600PCS/Box 3000PCS/Carton

Package Dimensions

TO-247-2L

Symbol	Dimensions in mm		Dimensions in Inch	
	Min.	Max.	Min.	Max.
A	4.90	5.10	0.193	0.201
A1	1.90	2.10	0.075	0.083
A2	2.29	2.54	0.090	0.100
b	1.00	1.40	0.039	0.055
b1	2.00	2.20	0.079	0.087
c	0.50	0.70	0.020	0.028
D	15.75	16.05	0.620	0.632
E	20.20	20.80	0.795	0.819
e1	10.90 (BSC)		0.429 (BSC)	
F	6.05	6.25	0.238	0.246
F1	5.80	6.00	0.228	0.236
L	20.10	20.40	0.791	0.803
L1	4.05	4.35	0.159	0.171
Φ	3.50	3.70	0.138	0.146

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