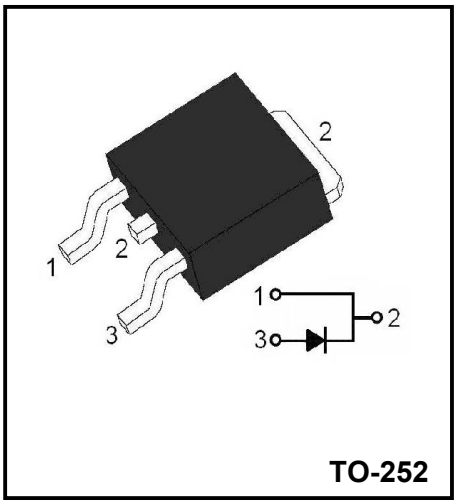
SiC Schottky Barrier Rectifier

Features

- Reverse withstand voltage 650V
- Zero reverse recovery current
- High working frequency
- Switch characteristics are not affected by temperature
- Fast switching speed
- Positive temperature coefficient of positive pressure drop



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Advantages

- Very low switching loss
- Higher efficiency
- Low dependence of the system on the heat sink
- No thermal collapse in parallel devices

Application

- Switching mode power supply, AC/DC converter
- Power factor correction
- Motor drive
- PV inverter and wind turbine

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Test conditions	Value	Unit
Peak repetitive reverse voltage	V_{RRM}		650	V
Working Peak Reverse voltage	V_{RWM}		650	V
DC Blocking Voltage	V_{DC}		650	V
Average rectified output current	$I_{F(AV)}$	Ta=25℃ Ta=125℃ Ta=150℃	35 16 13	A
Forward repetitive peak current	I_{FRM}	T_C=25℃, tp=10ms,Half Sine Wave T_C=110℃,tp=10ms,Half Sine Wave	52 34	A
Forward surge current	I_{FSM}	T_C=25℃, tp=10ms,Half Sine Wave T_C=110℃,tp=10ms,Half Sine Wave	104 82	A
Power dissipation	P_{tot}	Ta=25℃ Ta=110℃	166 72	W
Junction temperature	T_j		-55 ~ +175	℃
Storage temperature	T_{stg}		-55 ~ +175	℃

Thermal characteristics

Parameter	Symbol	Vaule	Unit
Thermal Resistance - Junction to Case	$R_{\theta JC}$	1.1	°C/ W

Electrical Characteristics (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 13 A, T_j=25℃ I_F = 13 A, T_j=175℃		1.5 2.0	1.8 2.4	V
Reverse current	I_R	V_R = 650V, T_j=25℃ V_R = 650V, T_j=175℃		15 30	75 300	μA
Total capacitive charge	Q_C	V_R = 400V, I_F = 10A di/dt=500A/μs, ,T_j=25℃		39		nC
Total capacitance	C	V_R = 0V, T_j=25℃, f=1MHz V_R = 200V, T_j=25℃, f=1MHz V_R = 400V, T_j=25℃, f=1MHz		650 57 47		pF
Capacitance stored energy	E_C	V_R = 400V		4.8		μJ

Typical Characteristic

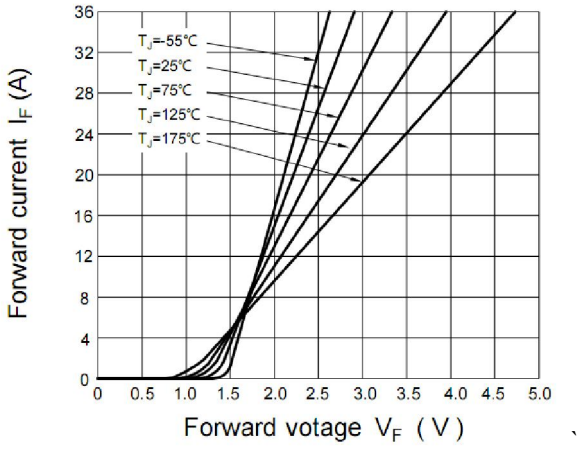

Figure 1. Forward Characteristics

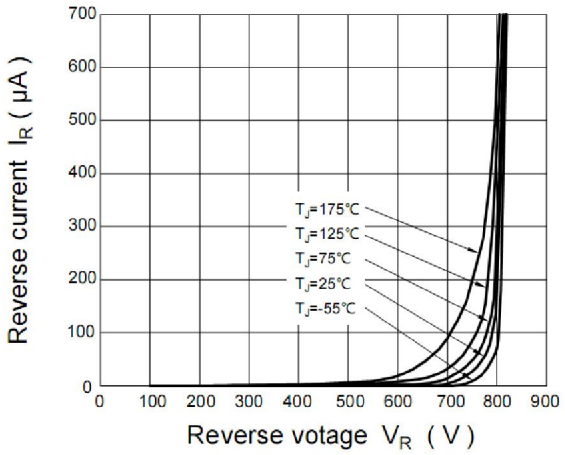

Figure 2. Reverse Characteristics

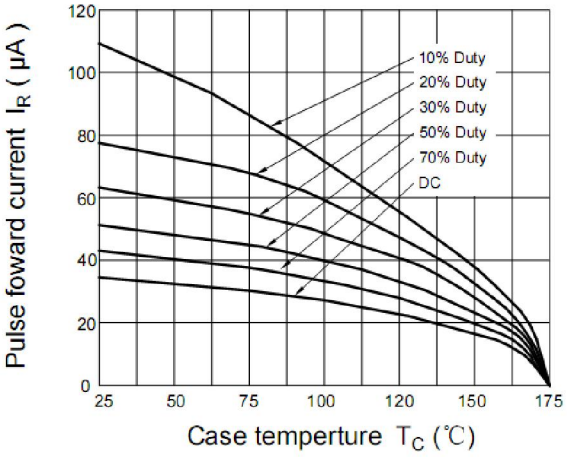

Figure 3. Current Derating

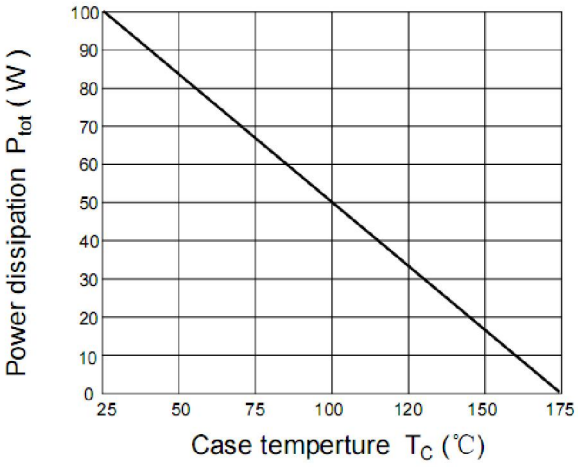

Figure 4. Power Derating

Typical Characteristic

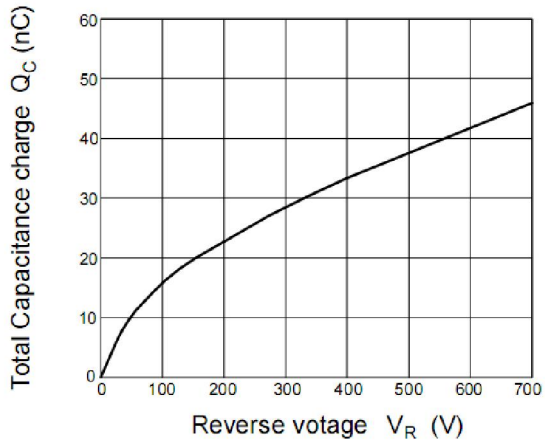

Figure 5. Total Capacitance charge vs. reverse voltage

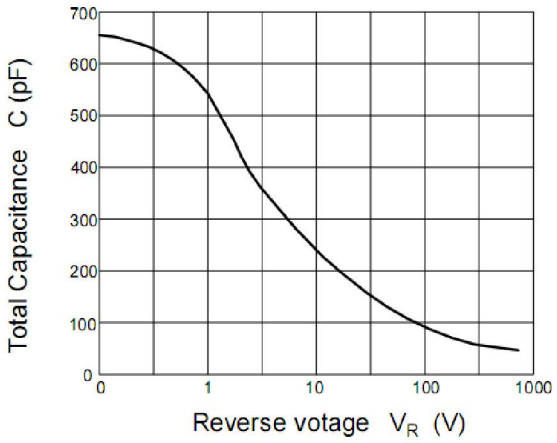

Figure 6. Capacitance vs reverse voltage

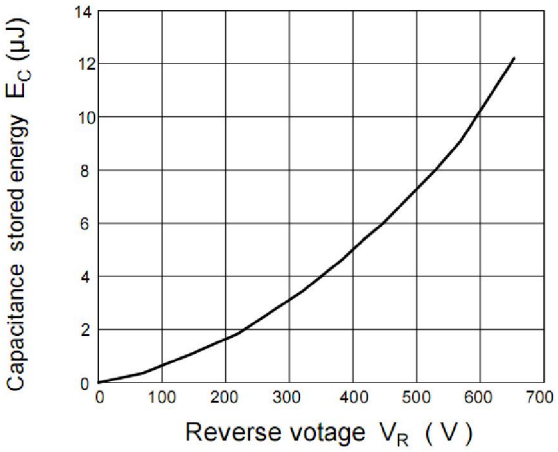

Figure 7. Capacitance stored energy

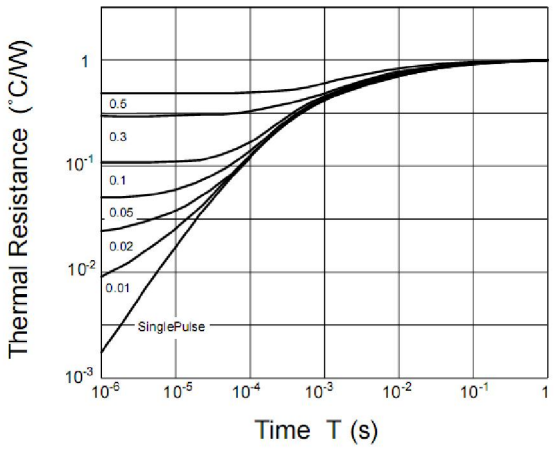

Figure 8. Transient Thermal Impedance

Package Dimensions

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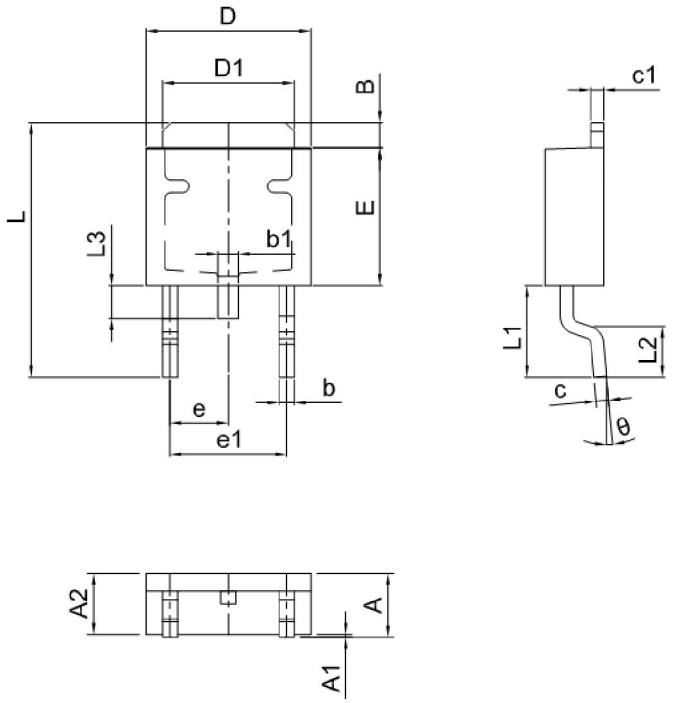

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.60	10.20	0.378	0.402
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059
θ	0°	8°	0°	8°

Product Specification Classification

Part Number	Package	Marking	Pack
YFWD313065CS	TO-252	YFW D313065CS XXXXX	2500PCS/Tape

单击下面可查看定价，库存，交付和生命周期等信息

>>YFW(佑风微)