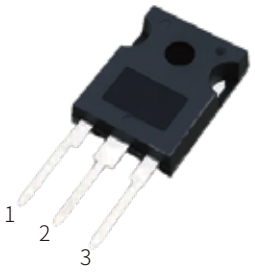
FEATURES

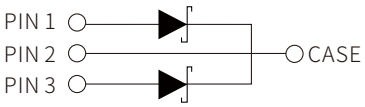
- Low conduction loss due to low V_F
- Extremely low switching loss by tiny Q_C
- Highly rugged due to better surge current
- Industrial standard quality and reliability



TO-247

APPLICATIONS

- UPS
- Power Inverter
- High performance SMPS
- Power factor correction



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	650	V
Surge Peak Reverse Voltage		V_{RMS}	650	V
DC Peak Reverse Voltage		V_R	650	V
Continuous Forward Current (Per leg/Device)	T_C=25°C	I_F	84/168	A
	T_C=135°C		43/86	
	T_C=153°C		30/60	
Repetitive Peak Forward Surge tp=10ms,Half Sine Pulse Current (Per leg)	T_C=25°C	I_{FRM}	131	A
	T_C=110°C		112	
Non-Repetitive Forward Surge Current (Per leg) ,tp=10ms, Half Sine Pulse	T_C=25°C	I_{FSM}	210	A
	T_C=110°C		170	

Parameter		Symbol	Value	Unit
i^2dt value (Per leg) ,tp=10ms, Half Sine Pulse	T_C=25°C	$\int i^2dt$	220	A^2s
	T_C=110°C		144	
Power dissipation (Per leg/Device)	T_C=25°C	P_{tot}	214/428	W
	T_C=110°C		92/184	
Thermal resistance, junction – case (Per leg/Device)		$R_{\theta JC}$	0.7/0.35	°C/W
Operating junction Range		T_J	-55 ~ +175	°C
Storage temperature Range		T_{stg}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	I_F= 30A,T_j=25°C	V_F		1.35	1.5	V
	I_F= 30A,T_j=175°C			1.65	1.8	
Reverse Current	V_R = 650V,T_j=25°C	I_R			150	μA
	V_R = 650V,T_j=175°C				200	
Total Capacitance	V_R=0V,f=1MHz,T_j=25°C	C		1968		pF
	V_R=200V,f=1MHz,T_j=25°C			202		
	V_R=400V,f=1MHz,T_j=25°C			166		
Total Capacitive Charge	V_R=400V,T_j=25°C $Q_C=\int_0^{V_R} C(V)dV$	Q_C		105		nC

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

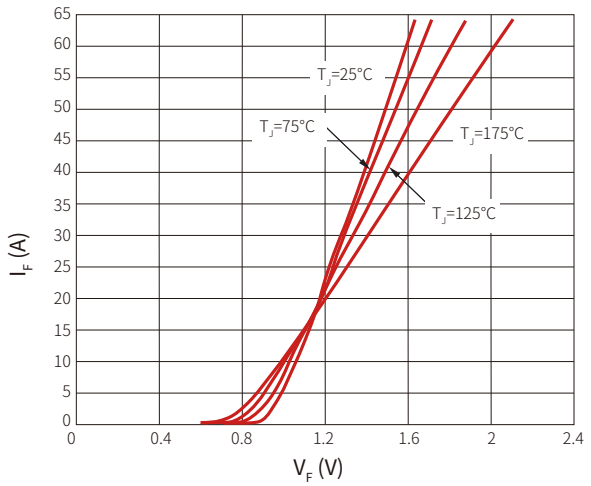


Fig.2 Reverse Characteristics

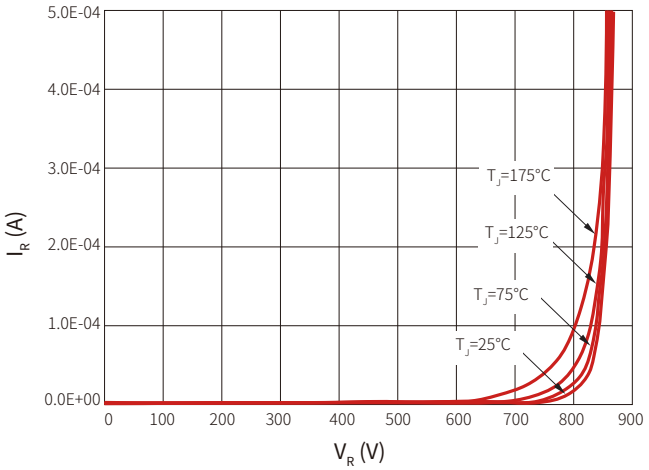


Fig.3 Current Derating

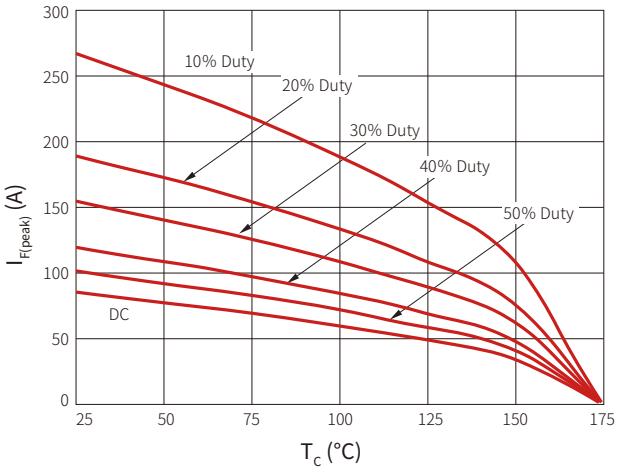


Fig.4 Power Derating

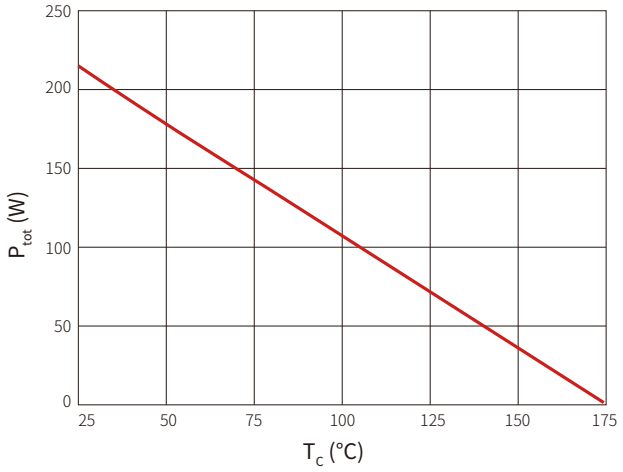


Fig.5 Capacitance vs. Reverse Voltage

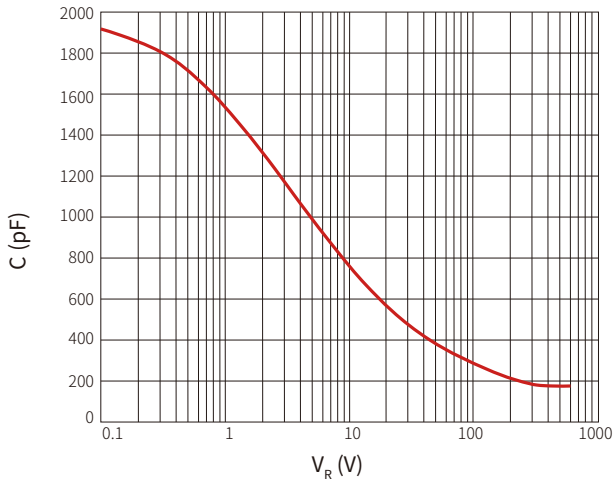


Fig.6 Reverse Charge vs. Reverse Voltage

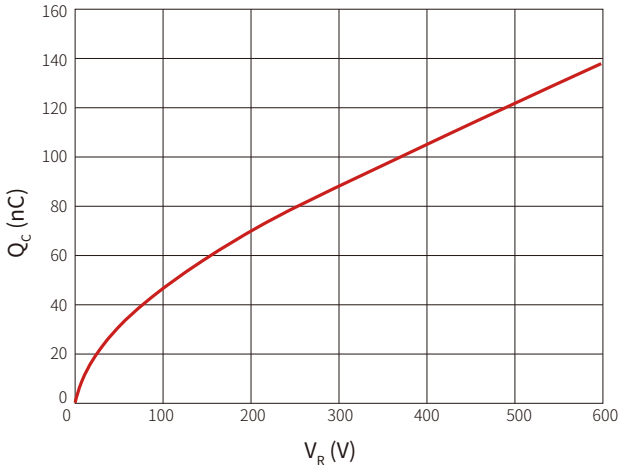


Fig.7 Typical Capacitance Stored Energy

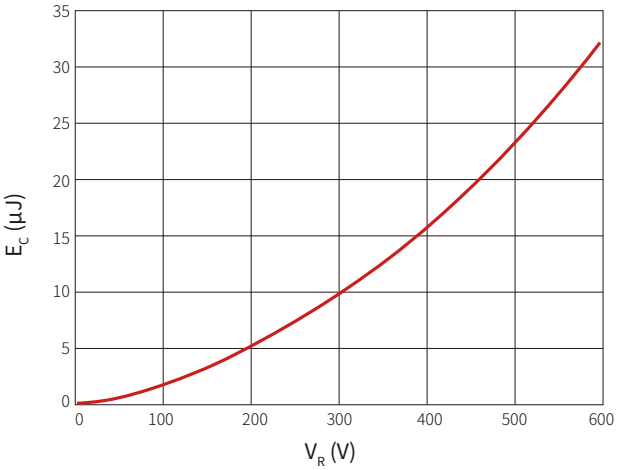
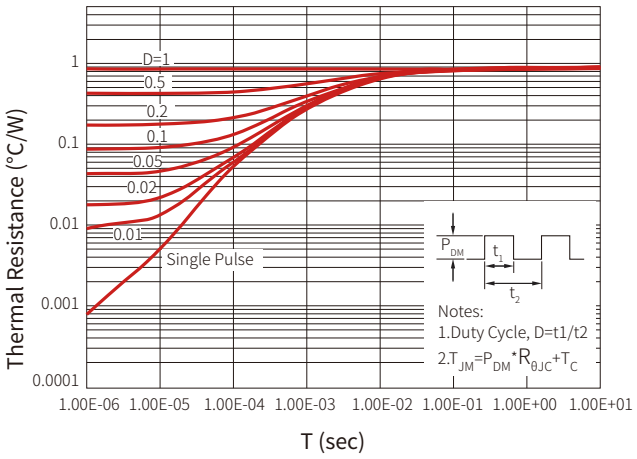
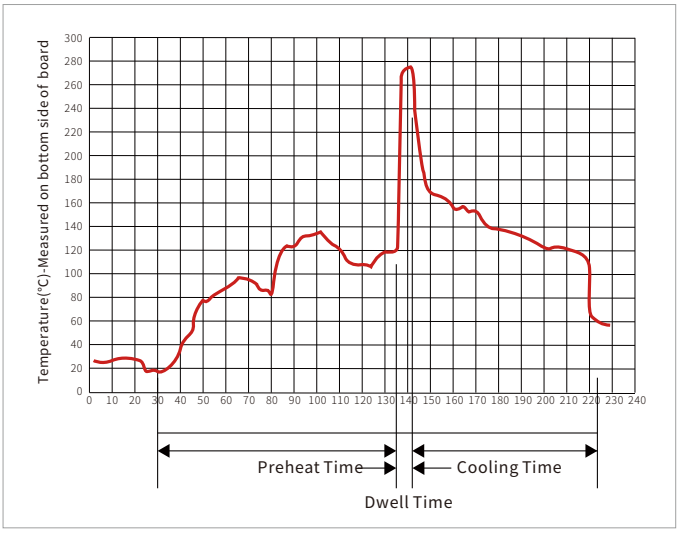


Fig.8 Transient Thermal Impandance

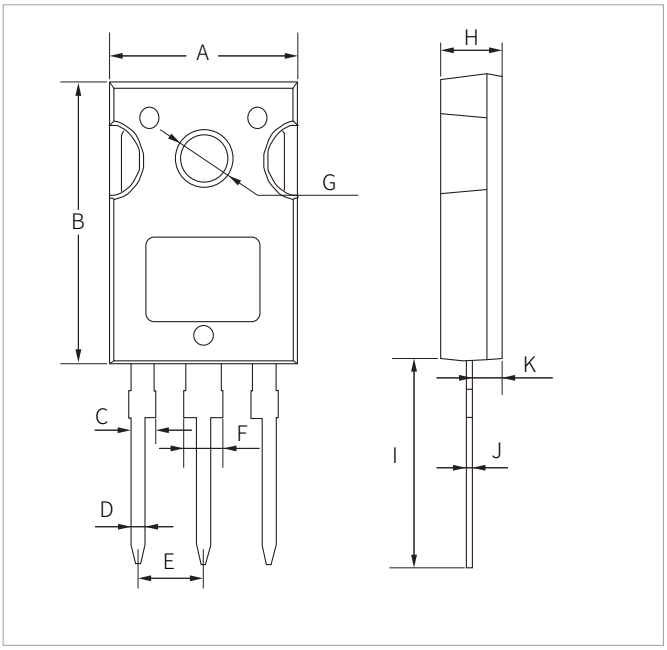


WAVE SOLDERING



Wave Parameter		Lead–free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

TO-247 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	15.4	16.1	0.606	0.634
B	19.5	21.3	0.767	0.839
C	1.8	2.2	0.070	0.087
D	1.11	1.36	0.044	0.053
E	5.2	5.7	0.204	0.225
F	2.8	3.21	0.110	0.126
G	3.4	3.8	0.133	0.149
H	4.8	5.2	0.188	0.205
I	14.0	14.5	0.550	0.570
J	0.4	0.75	0.015	0.030
K	2.23	2.59	0.088	0.102

ORDERING INFORMATION

Part Number	Component Package	QTY/Tube	QTY/Box	QTY/Carton
PSW065D60	TO-247	30PCS	450PCS	2250PCS

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Wechat

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