RoHS
COMPLIANT

V_{RRM}	1200V
$I_{F\ (135°C)}$	15A
Q_C	53nC

- Positive temperature coefficient
- Temperature-independent switching
- Maximum working temperature at 175 °C
- Unipolar devices and zero reverse recovery current
- Zero forward recovery current
- Essentially no switching losses
- Reduction of heat sink requirements
- High-frequency operation
- Reduction of EMI

Typical applications are in power factor correction(PFC), solar inverter, uninterruptible power supply, motor drives, photovoltaic inverter, electric car and charger.

- : TO-220
- : Tin plated leads
- : As marked

■ (T_C=25℃ Unless otherwise specified）

Device marking code			D112010PQG2
Reverse voltage (repetitive peak) @ T_j=25°C	V_{RRM}	V	1200
Reverse voltage (Surge Peak) @ T_j=25°C	V_{RSM}	V	1200
Reverse voltage (DC) @ T_j=25°C	V_{DC}	V	1200
Continuous forward current @ T_c=25°C	I_F	A	31
Continuous forward current @ T_c=135°C			15
Continuous forward current @ T_c=157°C			10
Non-repetitive peak forward surge current @ T_c=25°C, tp=10ms, Half Sine Wave	I_{FSM}	A	85
Power Dissipation@ T_c=25°C	P_{TOT}	W	170
Power Dissipation@ T_c=110°C			73
i^2t Value@ Tc=25°C ,tp=10ms	$\int i^2dt$	A^2S	36
Operating junction and Storage temperature range	T_j ,T_{stg}	°C	-55 to +175

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Forward voltage drop	V_F	V	I_F=10A, T_j=25°C	1.42	1.54
			I_F=10A, T_j=175°C	2.1	-
Reverse leakage current	I_R	μA	V_R=1200V, T_j=25°C	1.3	13
			V_R=1200V, T_j=175°C	6	-
Total capacitive charge	Q_C	nC	V_R=800V, T_j=25°C , $QC=\int_0^{VR} C(V)dV$	53	
Total capacitance	C	pF	V_R=0V, f=1MHZ	700	-
			V_R=400V, f=1MHZ	49	-
			V_R=800V, f=1MHZ	39	-
Capacitance Stored Energy	E_C	μJ	V_R=800V	14	-

■ （T_a=25℃ Unless otherwise specified）

Thermal resistance	$R_{\theta J-C}$	°C /W	0.88

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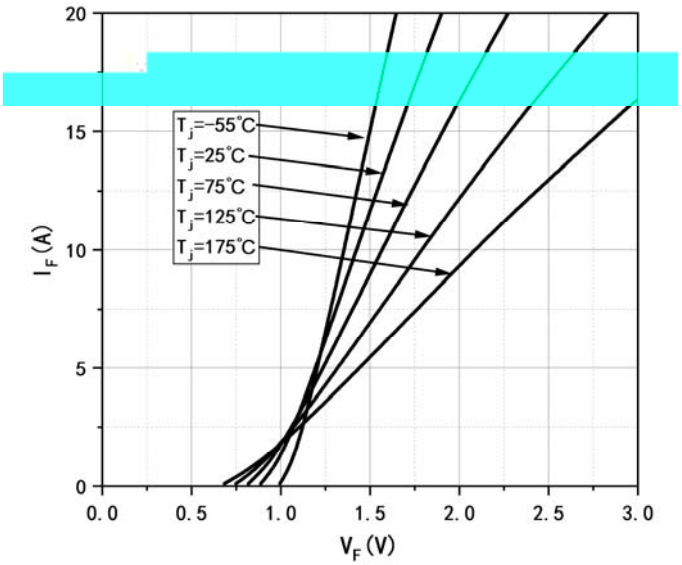

Figure 1. Forward Characteristics

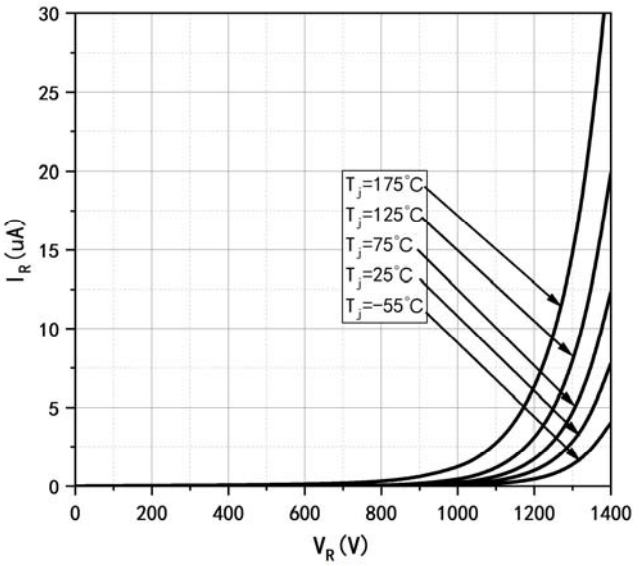

Figure 2. Reverse Characteristic

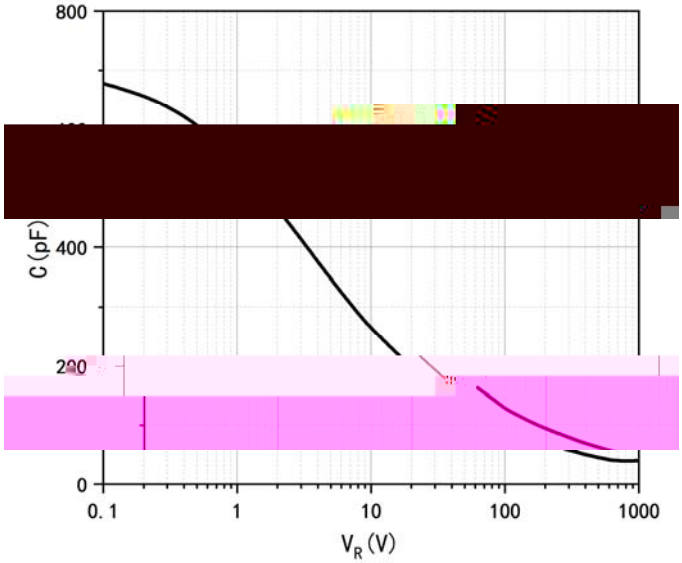

Figure 3. Capacitance vs. Reverse Voltage

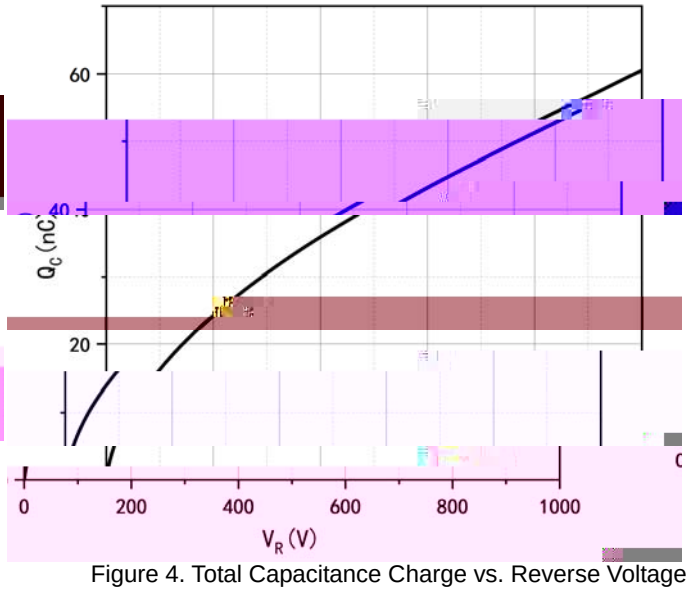

Figure 4. Total Capacitance Charge vs. Reverse Voltage

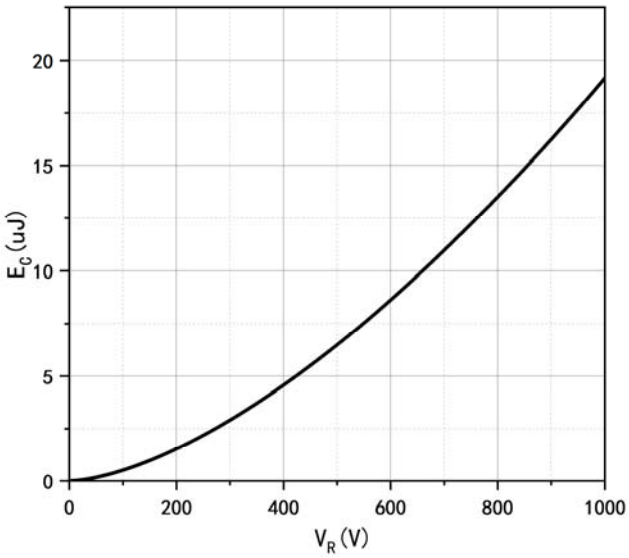

Figure 5. Capacitance Stored Energy

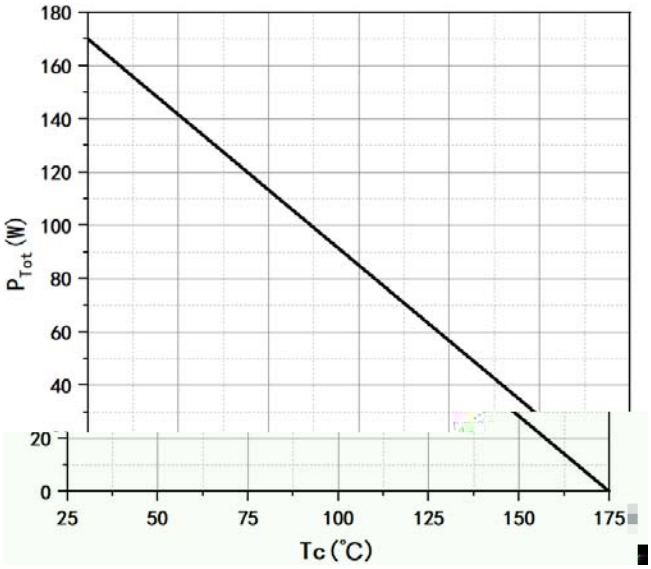

Figure 6. Power Derating

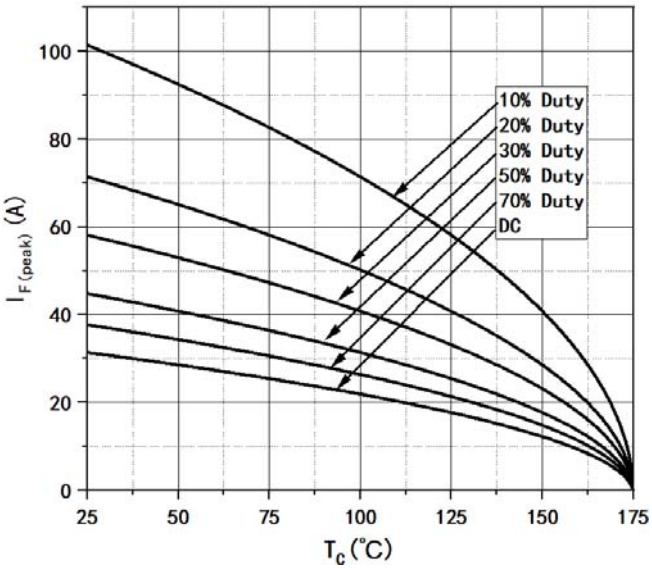

Figure 7. Current Derating

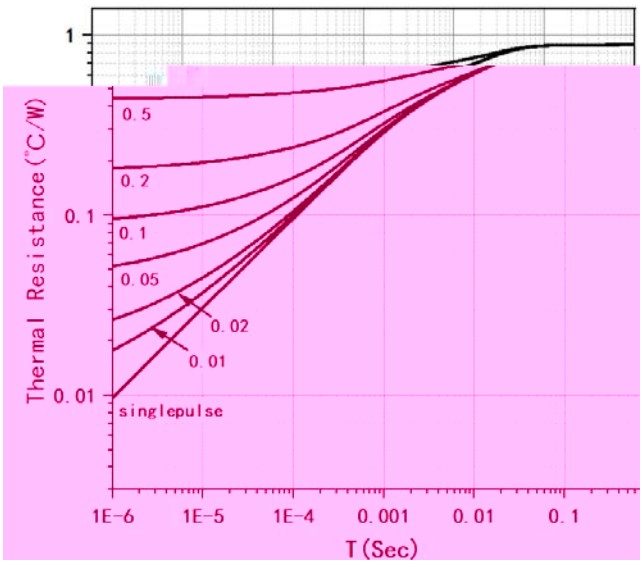

Figure 8. Transient Thermal Impedance

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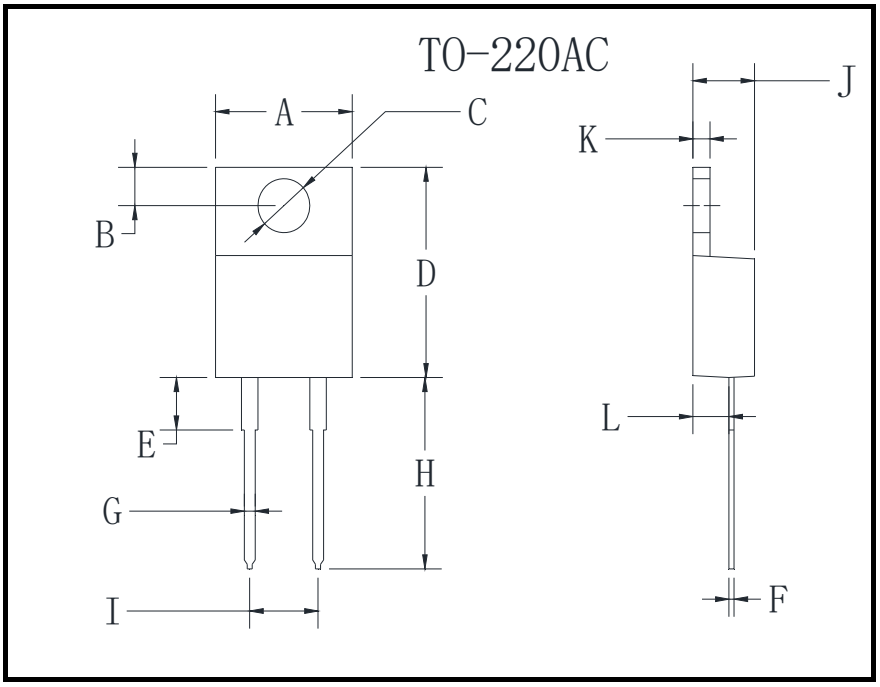

Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.75	4.05
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.3	13.9
I	4.86	5.26
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79

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