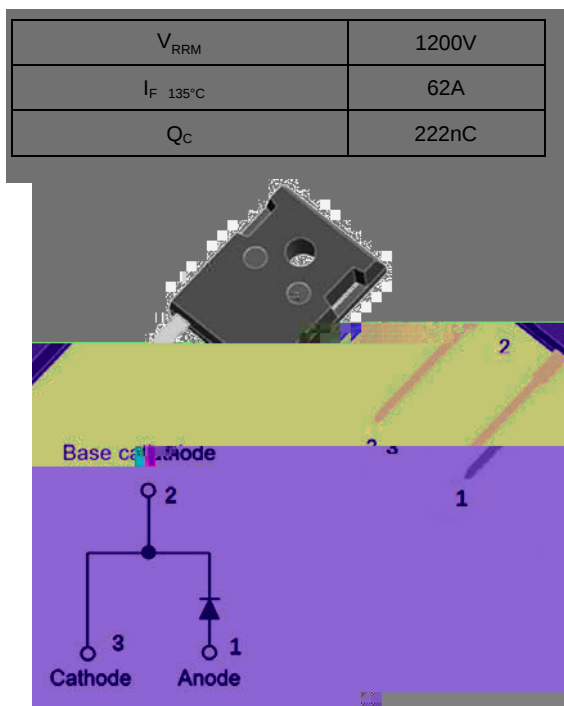




- Positive temperature coefficient
- Temperature-independent switching
- Maximum working temperature at 175 °C
- Unipolar devices and zero reverse recovery current
- Zero forward recovery current
- Essentially no switching losses
- Reduction of heat sink requirements
- High-frequency operation
- Reduction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

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

- : TO-247AC
- : Tin plated leads
- : As marked

(T_c=25 Unless otherwise specified

Device marking code			D112040NGG2
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	133
Continuous forward current @ T _c =135°C			62
Continuous forward current @ T _c =155°C			40
Non-repetitive peak forward surge current @ T _c =25°C, tp=10ms, Half Sine Wave	I _{FSM}	A	300
Power Dissipation@ T _c =25°C	P _{TOT}	W	573
Power Dissipation@ T _c =110°C			246
i ² t Value@ T _c =25°C ,tp=10ms	i ² dt	A ² S	450
Operating junction and Storage temperature range	T _j , T _{stg}	°C	-55 to +175

Forward voltage drop	V_F	V	$I_F=40A, T_J=25^{\circ}C$	1.38	1.55
			$I_F=40A, T_J=175^{\circ}C$	1.92	3.0
Reverse leakage current	I_R	μA	$V_R=1200V, T_J=25^{\circ}C$	1	25
			$V_R=1200V, T_J=175^{\circ}C$	17	-
Total capacitive charge	Q_C	nC	$V_R=800V, T_J=25^{\circ}C, Q_C=\int_0^{V_R} C(V)dV$	222	
Total capacitance	C	pF	$V_R=0V, f=1MHz$	2938	-
			$V_R=400V, f=1MHz$	206	-
			$V_R=800V, f=1MHz$	157	-
Capacitance Stored Energy	E_C	μJ	$V_R=800V$	57	-

$T_a=25$ Unless otherwise specified

Thermal resistance	$R_{\theta J-C}$	$^{\circ}C/W$	0.26

(Typical)

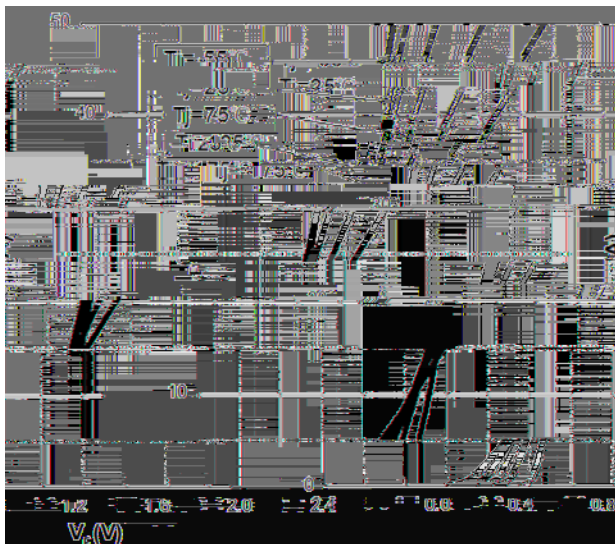


Figure 1. Forward Characteristics



Figure2. Reverse Characteristic



Figure 3. Capacitance vs. Reverse Voltage

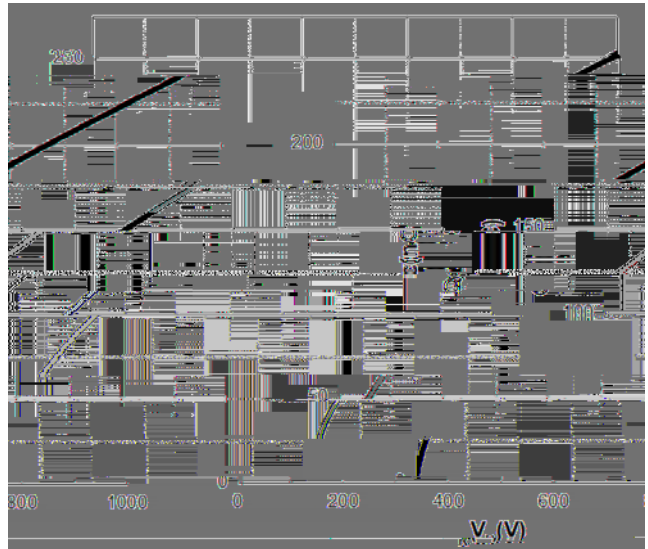


Figure 4. Total Capacitance Charge vs. Reverse Voltage

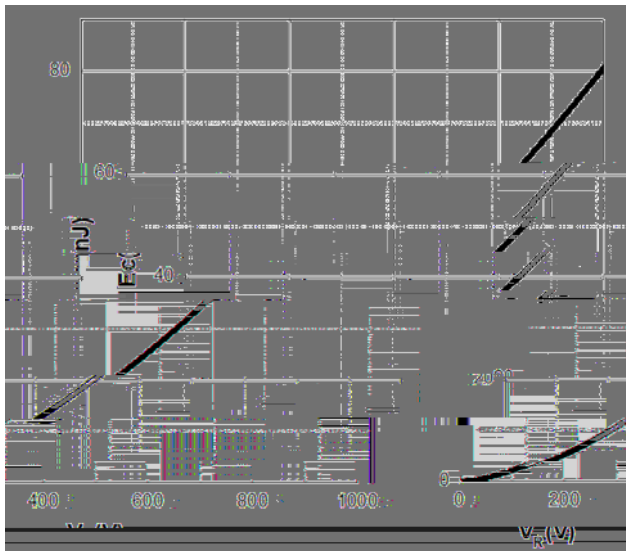


Figure 5. Capacitance Stored Energy

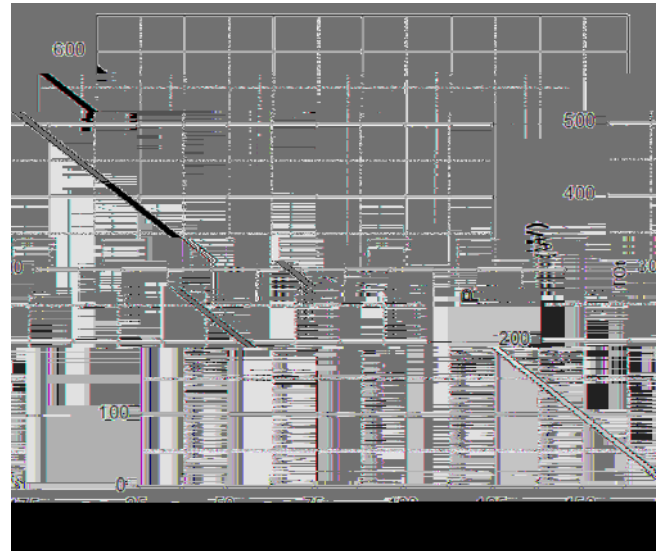


Figure 6. Power Derating

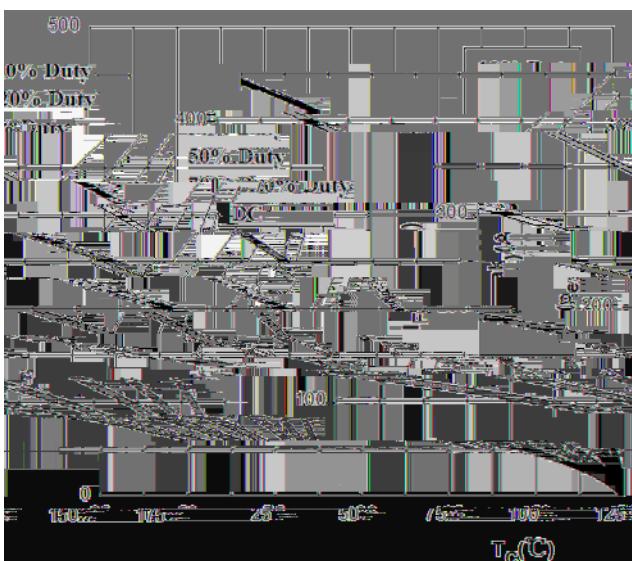


Figure 7. Current Derating

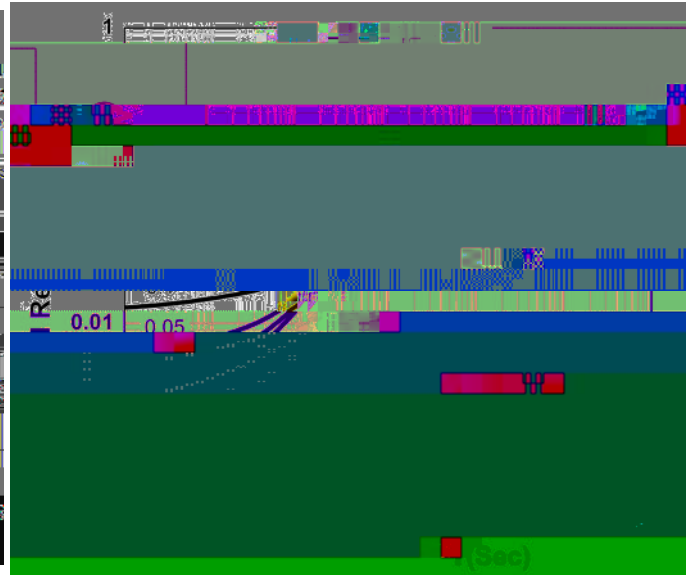


Figure 8. Transient Thermal Impedance



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Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.11	1.36
b2	1.91	2.21
c	0.51	0.75
D	20.70	21.30

