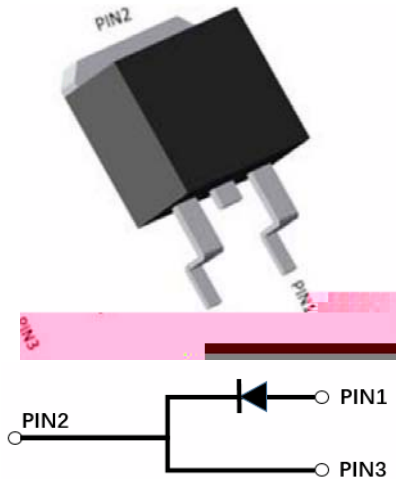


$V_{RRM}$	650V
$I_F$ (135°C)	22A
$Q_C$	62nC

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-263

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

: Tin plated leads

: As marked

( $T_C=25^\circ\text{C}$  Unless otherwise specified)

Device marking code			D106520BQG2
Reverse voltage (repetitive peak) @ $T_j=25^\circ\text{C}$	$V_{RRM}$	V	650
Reverse voltage (Surge Peak) @ $T_j=25^\circ\text{C}$	$V_{RSM}$	V	650
Reverse voltage (DC) @ $T_j=25^\circ\text{C}$	$V_{DC}$	V	650
Continuous forward current @ $T_c=25^\circ\text{C}$	$I_F$	A	48
Continuous forward current @ $T_c=135^\circ\text{C}$			22
Continuous forward current @ $T_c=140^\circ\text{C}$			20
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$ , Half Sine Wave	$I_{FSM}$	A	160
Power Dissipation @ $T_c=25^\circ\text{C}$	$P_{TOT}$	W	144
Power Dissipation @ $T_c=110^\circ\text{C}$			62
$i^2t$ Value @ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$	$i^2dt$	$\text{A}^2\text{S}$	128
Operating junction and Storage temperature range	$T_j, T_{stg}$	$^\circ\text{C}$	-55 to +175



Forward voltage drop	$V_F$	V	$I_F=20A, T_J=25^\circ C$	1.35	1.55
			$I_F=20A, T_J=175^\circ C$	1.75	-
Reverse leakage current	$I_R$	$\mu A$	$V_R=650V, T_J=25^\circ C$	1	25
			$V_R=650V, T_J=175^\circ C$	5	-
Total capacitive charge	$Q_C$	nC	$V_R=400V, T_J=25^\circ C, Q_C = \int_0^{V_R} I_C(V)dV$	62	-
Total capacitance	C	$\mu F$	$V_R=0V, f=1MHz$	1157	-
			$V_R=200V, f=1MHz$	115.6	-
			$V_R=400V, f=1MHz$	107	-
Capacitance Stored Energy	$E_C$	$\mu J$	$V_R=400V$	7.8	-

( $T_A=25^\circ C$  Unless otherwise specified)

Thermal resistance	$R_{J-C}$	$^\circ C/W$	1.04

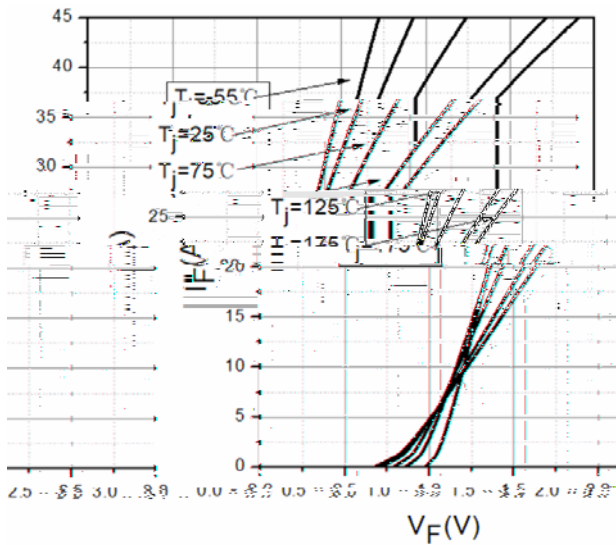


Figure 1. Forward Characteristics

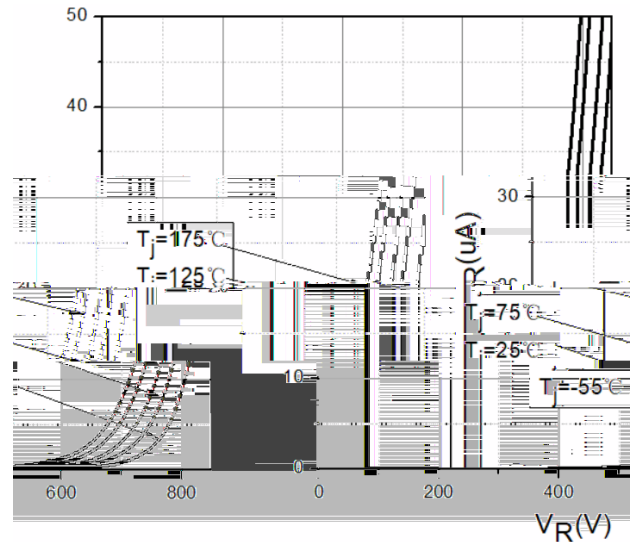


Figure 2. Reverse Characteristic







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