



3300V/ 50A Silicon Carbide Power Schottky Barrier Bare Die

Features

- Zero reverse recovery current
- Zero forward recovery voltage
- Temperature independent switching behaviour
- High temperature operation
- High frequency operation

Key Characteristics		
V_{RRM}	3300	V
I_F	50	A
Q_C	485	nC

Part No.	Anode	Cathode	Shipment
GW3-S33050	Al	Ag	box

Maximum Ratings

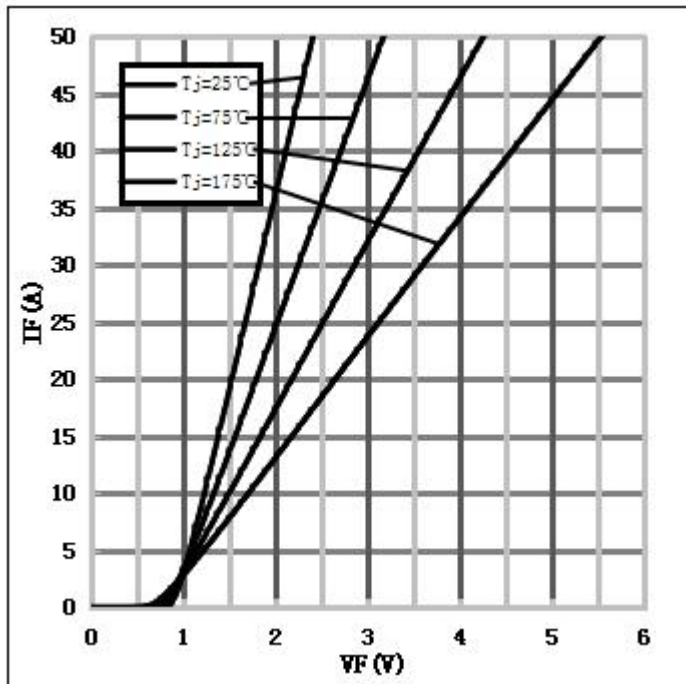
Parameter	Symbol	Test Condition	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		3300	V
Surge Peak Reverse Voltage	V_{RSM}		3300	V
DC Blocking Voltage	V_{DC}		3300	v
Continuous Forward Current	I_F	$T_C=25^{\circ}C$	50	A
Repetitive Peak Forward Surge Current	I_{FRM}	$T_C=25^{\circ}C$, $t_p=10ms$, Half sine Pulse	TBD	A
Non-repetitive Peak Forward Surge Current	I_{FSM}	$T_C=25^{\circ}C$, $t_p=10\mu s$, Pulse	TBD	A
Operating Junction	T_j		$-55^{\circ}C$ to $175^{\circ}C$	$^{\circ}C$
Storage Temperature	T_{stg}		$-55^{\circ}C$ to $175^{\circ}C$	$^{\circ}C$

Electrical Characteristics

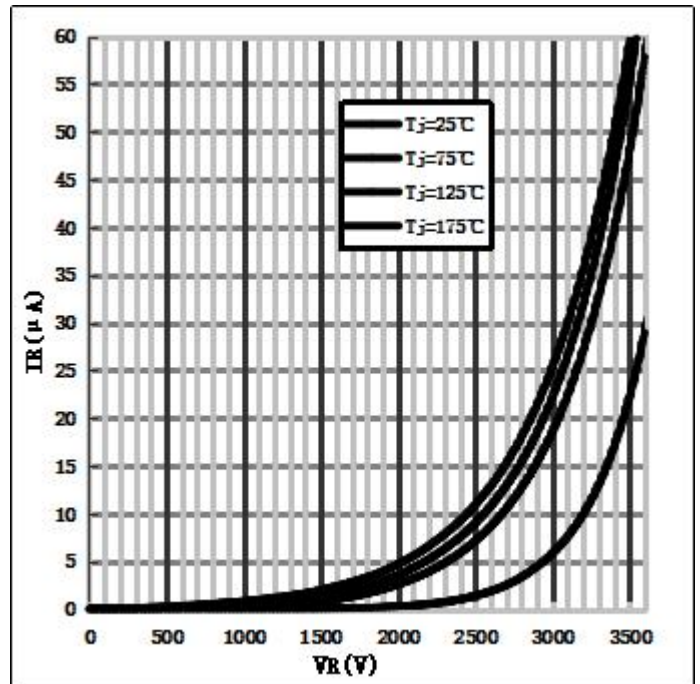
Parameter	Symbol	Test Conditions	Numerical		Unit
			Typ.	Max.	
Forward Voltage	V _F	I _F =50A, T _j =25°C	2.5	3	V
		I _F =50A, T _j =175°C	5.5	6.1	
Reverse Current	I _R	V _R =3300V, T _j =25°C	15	100	μA
		V _R =3300V, T _j =175°C	50	200	
Total Capacitive Charge	Q _C	V _R =2200V, T _j =150°C $Q_C = \int_0^{V_R} C(V)dV$	485	-	nC
Total Capacitance	C	V _R =0V, T _j =25°C, f=1MHZ	3800	4200	pF
		V _R =1000V, T _j =25°C, f=1MHZ	163	180	
		V _R =2000V, T _j =25°C, f=1MHZ	119	125	

Performance Graphs

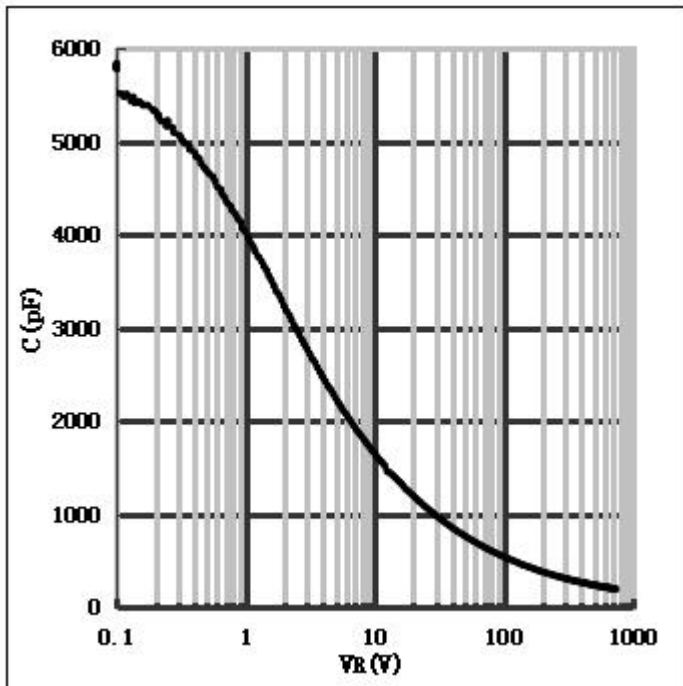
1) Forward IV characteristics as a function of T_j :



2) Reverse IV characteristics as a function of T_j :



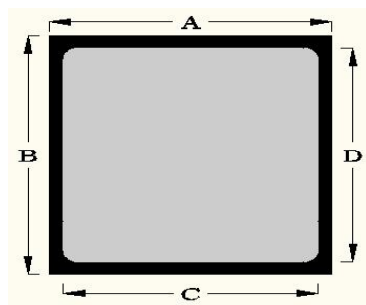
3) Capacitance vs. reverse voltage:



Size

Parameter	Size	Unit
Chip size	6.5*6.5	mm
Anode metal size	6.03*6.03	mm
Anode window	5.6*5.6	mm
Thickness	375 ± 25	um
Wafer size	100	mm
Anode metal thickness (AL)	4	um
Cathode metal thickness (Ag)	1.2	um
Front cover	Polyimide	

Chip size



symbol	size	
	mm	inch
A	6.5	0.256
B	6.5	0.256
C	5.6	0.22
D	5.6	0.22

Note: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU Directive 2011/65/EC(RoHS2). RoHS Certification and other certifications can be obtained from GPT sales representatives or GPT website: <http://globalpowertech.cn/English/index.asp>

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