

• Features

- Zero Forward Recovery Voltage
- Zero Reverse Recovery Current
- Excellent Surge Current Capability
- Temperature Independent Switching
- Positive Temperature Coefficient on V_F
- High Frequency Operation

Product Summary

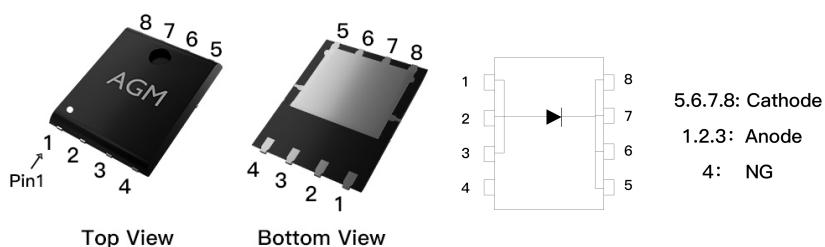
SiC Schottky Diode

VRRM	IF	Qc
300V	80A	95nC

PDFN5*6 Pin Configuration

• Application

- Solar inverters
- Uninterruptable power supplies
- Motor drives
- Power Factor Correction



Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
AGM80B300A	AGM80B300A	PDFN5*6	330mm	12mm	3000

Table 1. Absolute Maximum Ratings (TC=25°C)

Symbol	Parameter	Value	Unit
VRRM	Repetitive peak reverse voltage	300	V
IF(AVG)	Average forward current (Tc=145°C)	80	A
IFSM	Non-Repetitive forward surge current (Tc=25°C, tp =10ms, Half Sine Wave)	400	A
Ptot	Maximum Power Dissipation(Tc=25°C)	600	W
	Maximum Power Dissipation(Tc=110°C)	320	
Tj	Operating junction temperature	-55~175	°C
Tstg	Storage temperature	-55~175	°C

Electrical Characteristics

Table 2.Static Characteristics

Symbol	Parameter	Test conditions	Value			Unit
			Min.	Typ.	Max.	
VDC	DC blocking voltage	T _j =25°C		300		V
VF	Diode forward voltage	I _F =80A T _j =25°C		1.0		V
		I _F =80A T _j =175°C		1.25		
IR	Reverse current	VR=300V,T _j =25°C		0.5		μA
		VR=300V ,T _j =175°C		10		

Table 3.AC Characteristics

Symbol	Parameter	Test conditions	Value			Unit
			Min.	Typ.	Max.	
QC	Total capacitive charge	VR=240V T _j =25°C QC-"c(v)dv		100		nC
C	Total capacitance	VR=1V, f=1MHz		1200		pF
		VR=150V, f=1MHz		120		
		VR=300V,f=1MHz		50		
EC	Capacitance stored energy	VR=240V		13		μJ

Typical Performance

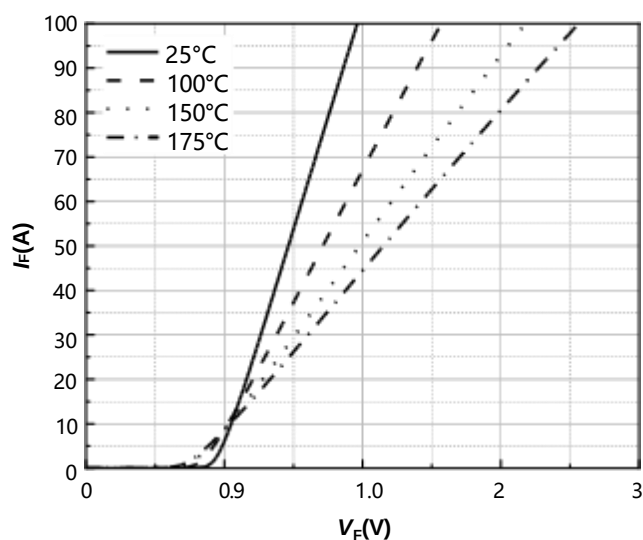


Figure 1. Typical forward characteristics

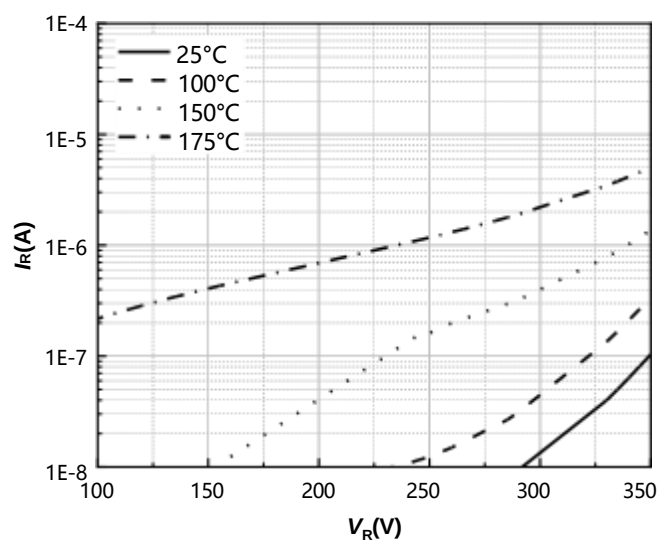


Figure 2. Typical reverse current as function of reverse voltage

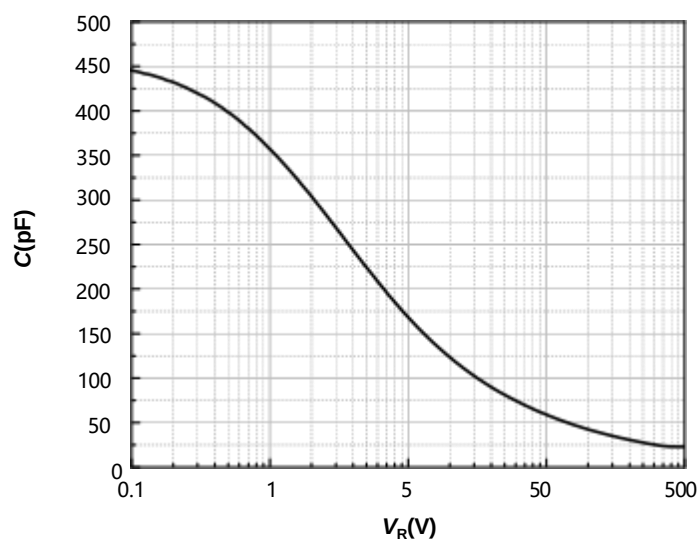


Figure 3. Typical capacitance as function of reverse voltage, $C=f(V_R)$; $T_J=25$. C; $f=1$ MHz

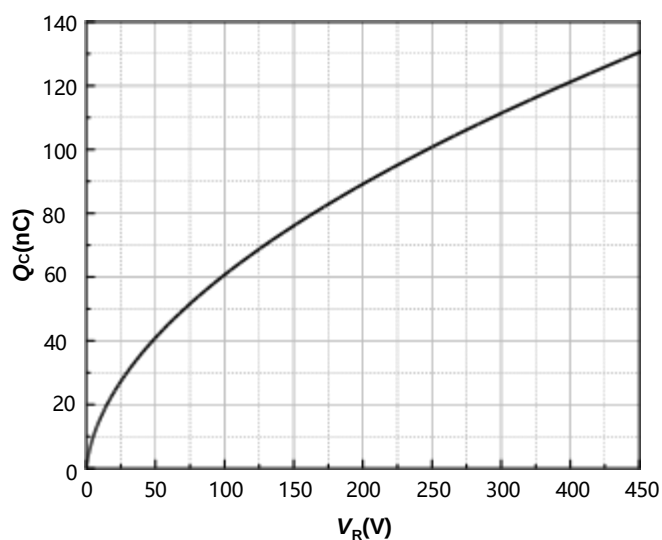
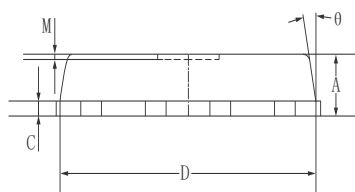
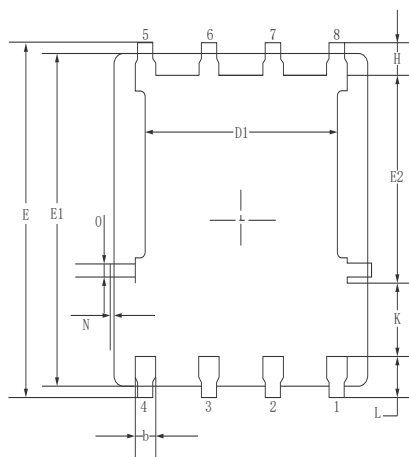
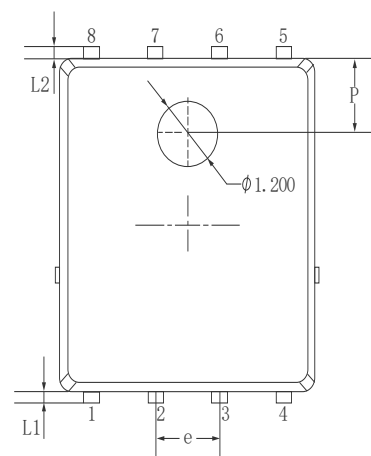


Figure 4. Typical reverse charge as function of reverse voltage

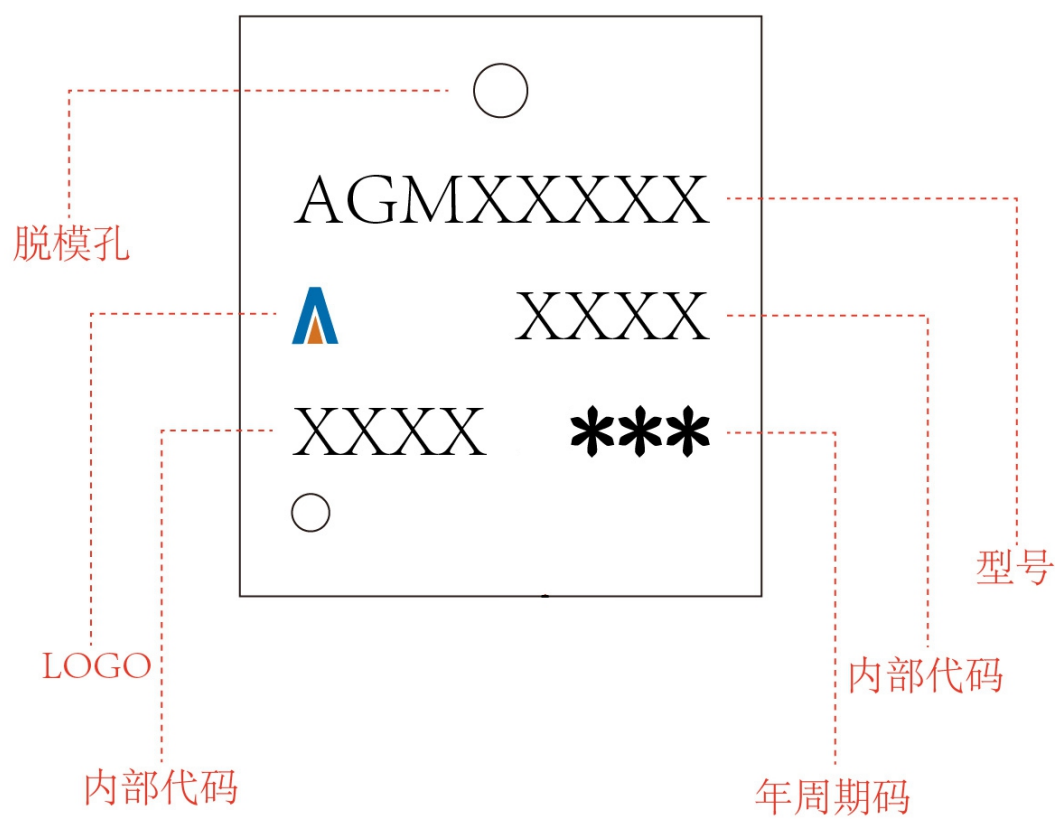
•Dimensions (PDFN5*6)



Symbol	Millimeters		
	MIN.	NOM.	MAX.
A	0.90	1.05	1.20
b	0.35	0.40	0.50
C	0.20	0.25	0.35
D	4.90	5.05	5.20
D1	3.72	3.82	3.92
E	6.00	6.15	6.30
E1	5.60	5.75	5.90
E2	3.47	3.57	3.67
e	1.27 BSC.		
H	0.48	0.58	0.68
K	1.17	1.27	1.37
L	0.64	0.74	0.84
L1/L2	0.20 REF.		
θ	8°	10°	12°
M	0.08 REF.		
N	0	-	0.15
O	0.25 REF.		
P	1.28 REF.		

PDFN5*6

Marking Instructions:



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