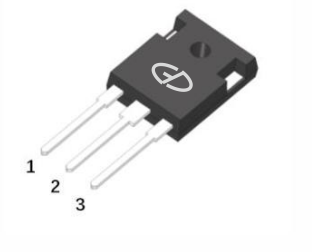
16A, 650V Silicon Carbide Schottky Diode

Features

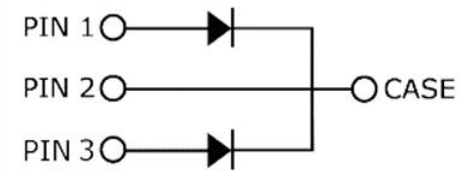
- High-Frequency Operation
- Zero Reverse Recovery Current
- Temperature-Independent Switching
- Extremely Fast Switching
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-247-3

Applications

- Boost Diodes in PFC or DC/DC stages
- LED Lighting Power Supplies
- Power Factor Correction



Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 30 units per plastic tube

Maximum Ratings & Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter		Symbol	GS16D065CP	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	650	V
Working peak reverse voltage		V_{RWM}	650	V
Maximum DC blocking voltage		V_{DC}	650	V
Maximum average forward rectified current	T_C=25°C	$I_{F(AV)}$	28/56	A
	T_C=135°C		13/26	
	T_C=160°C		8/16	
Peak forward surge current，tp=10ms,Half Sine Pulse (Per leg)		I_{FSM}	65	A
Power dissipation	T_C=25°C	P_{tot}	100/200	W
	T_C=110°C		43/86	
Operating junction temperature range		T_J	-55 to +175	°C
Storage temperature range		T_{STG}	-55 to +175	°C

Electrical Specifications(T_A=25℃ unless otherwise noted)

Parameter (Per leg)	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage (Per leg)	V_F	I_F=8A, T_J=25℃	1.3	1.5	V
		I_F=8A, T_J=175℃	1.55	-	
Reverse leakage current (Per leg)	I_R	V_R=650V, T_J=25℃	5	50	μA
		V_R=650V, T_J=175℃	10	200	
Total capacitive charge(Per leg)	Q_C	V_R=400V, T_J=25℃	22	-	nC
Total capacitance (Per leg)	C	V_R=400V, T_J=25℃, f=1MHz	34	-	pF

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5/0.75	-	℃ /W

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

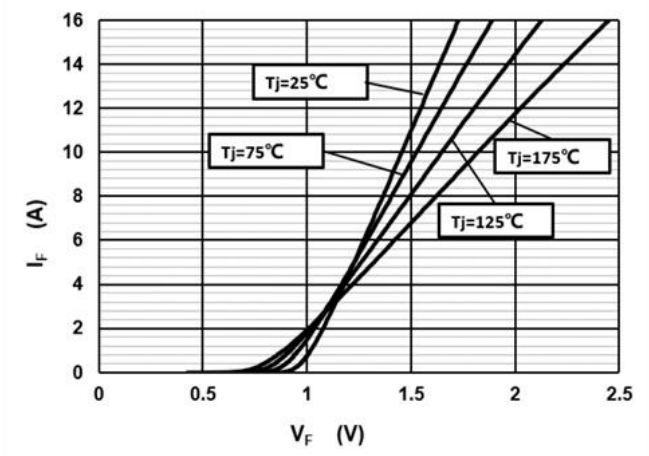


Fig.1 –Forward Characteristics

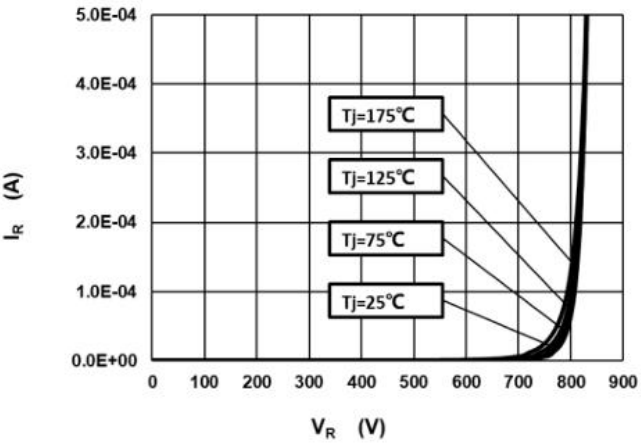


Fig.2 –Reverse Characteristics

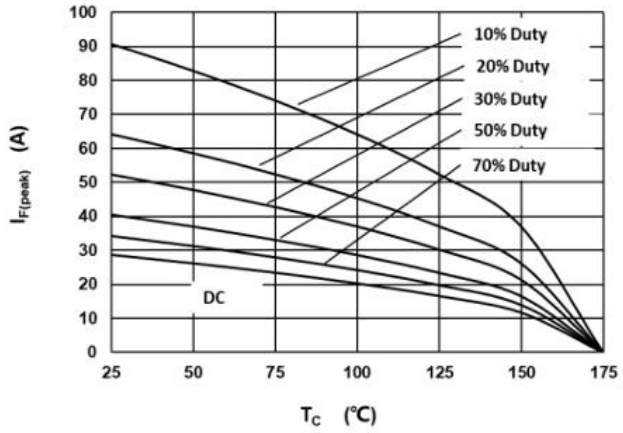


Fig.3 –Current Derating

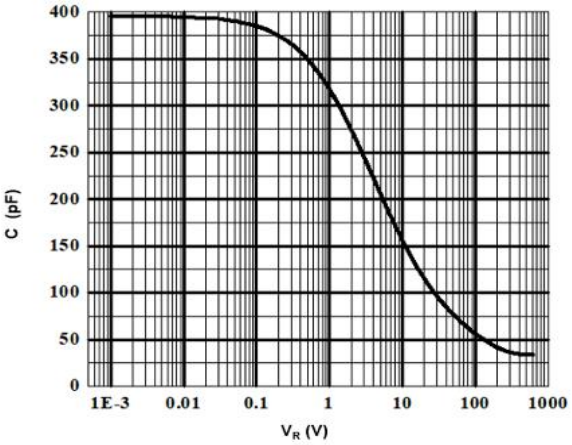


Fig.4 –Capacitance vs. Reverse Voltage

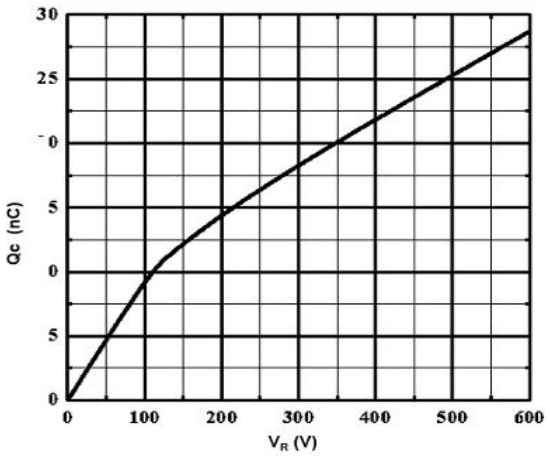


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

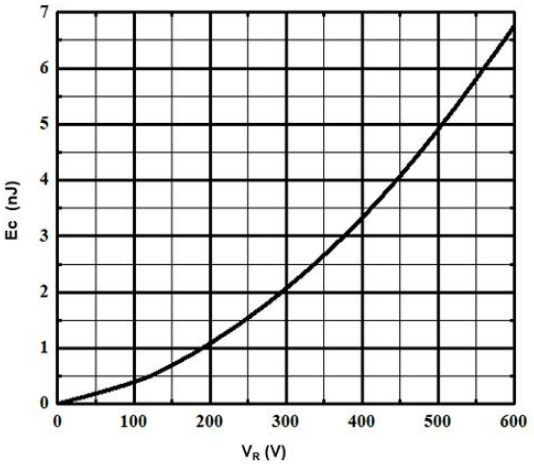
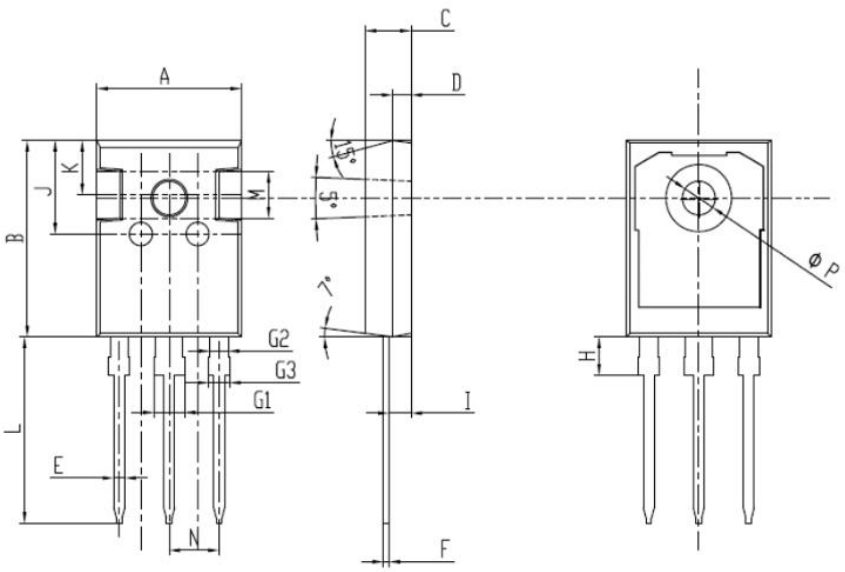


Fig.6 –Typical Capacitance Stored Energy

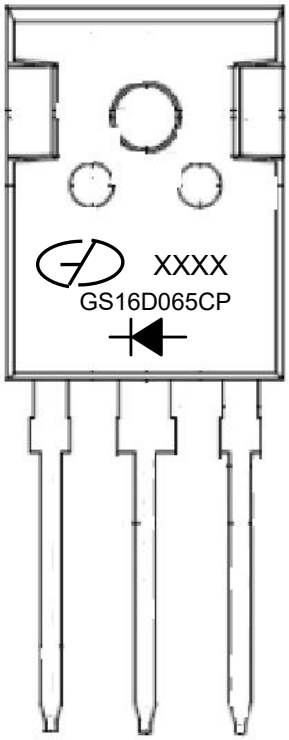
Package Outline Dimensions (Unit: millimeters)

TO-247-3



项目	规范(mm)	
	MIN	MAX
A	15.70	15.90
B	20.90	21.10
C	4.90	5.10
D	1.90	2.10
E	1.10	1.30
F	0.45	0.75
G1	3.00	3.20
G2	1.85	2.15
G3	2.00	2.20
H	4.00	4.30
I	2.30	2.50
J	9.90	10.10
K	5.70	5.90
L	19.80	20.20
M	4.85	5.15
N	5.286	5.586
ϕP	3.40	3.60

Marking Outline



1. Logo Mark:
2. Data code: XXXX
3. Part Name:GS16D065CP
4. Polarity :

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd.or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.
(http://www.goodark.com)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.