Technical Data
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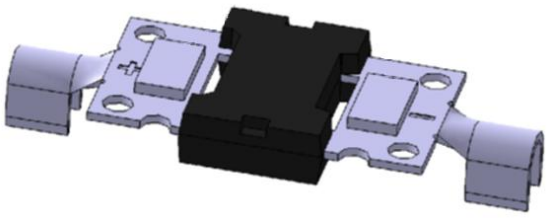
GF5145TC Power Schottky Module Bypass Diode



GFM

Features

- Trench MOS Schottky technolog
- Low thermal resistance
- Lower forward voltage drop, low power loss
- Isolate Package design, ideal for heat dispersion
- High forward current capability
- Excellent anti-humidity
- Low profile package
- High forward surge capability
- All SMC parts are traceable to the wafer lot
- Additional electrical and life testing can be performed upon request

Mechanical Data

- Case: GFM
- Terminals: Copper
- High temperature soldering guaranteed
- Heated-tool welding 260˚C,10seconds
- Marking Code: GF5145TC

Maximum Ratings(limiting values, at 25 ˚C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	45	V
Average Rectified Forward Current	$I_{F(AV)}$	Tc=111˚C, In DC	50	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	450	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 50A, Pulse, T_J = 25 ˚C	0.47	0.52	V
Reverse Current*	I_{R1}	@V_R = rated V_R T_J = 25˚C	0.03	0.5	mA
	I_{R1}	@V_R = rated V_R T_J = 100˚C	-	30	mA
	I_{R1}	@V_R = rated V_R T_J = 125˚C	30	80	mA

* Pulse width < 300 μs, duty cycle < 2%

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Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	IN DC Forward Mode, without reverse bias, t ≤1 h	-55 to +200	˚C
Storage Temperature	T_{stg}	-	-55 to +150	˚C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	-	1.5	˚C/W

Ratings and Characteristics Curve

Figure1 Typical Forward Characteristics

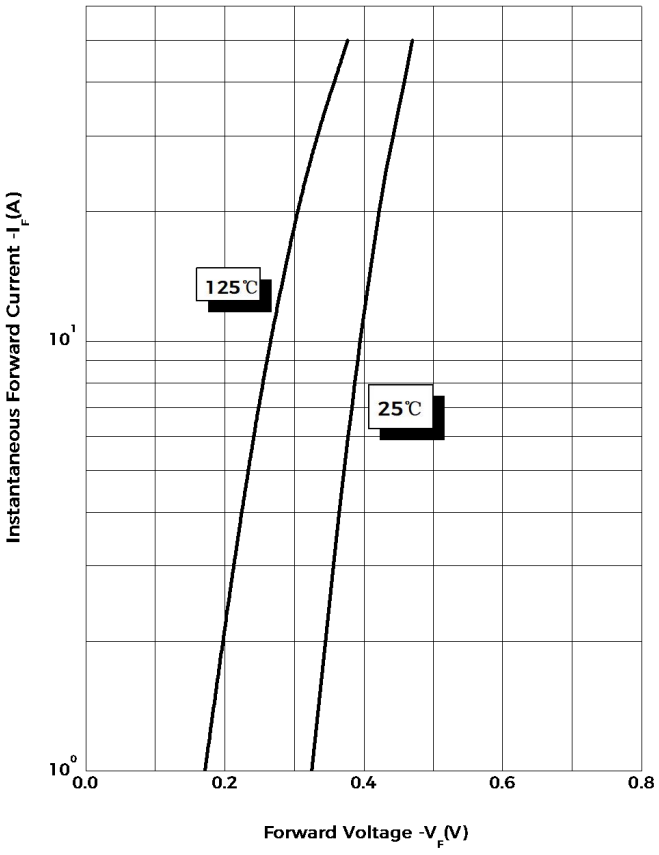


Figure 2 Typical Reverse Characteristics

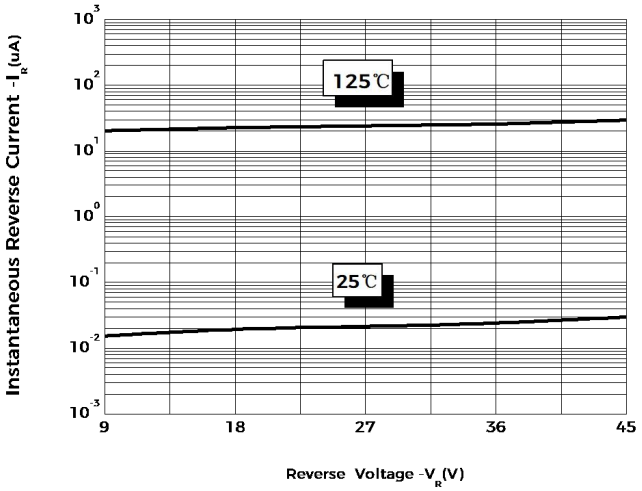
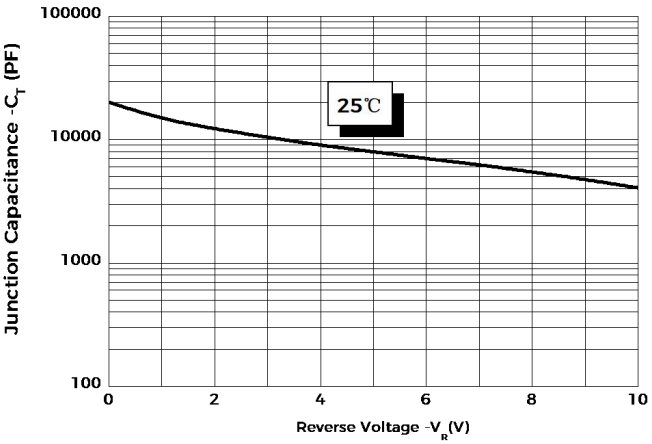


Figure 3 Typical Junction Capacitance



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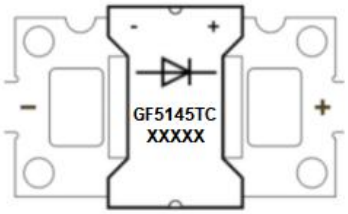
Ordering Information

Device	Package	Shipping
GF5145TC	GFM	30pcs / Tube

Marking Diagram



Where XXXXX is YYWWL

GF5145TC = Marking Code
YY = Year
WW = Week
L = Lot Number

Order P/N	Terminals	Additional
GF5145TC-S1	Tin Plated	None
GF5145TC-S3	Tin Plated	Solder Block

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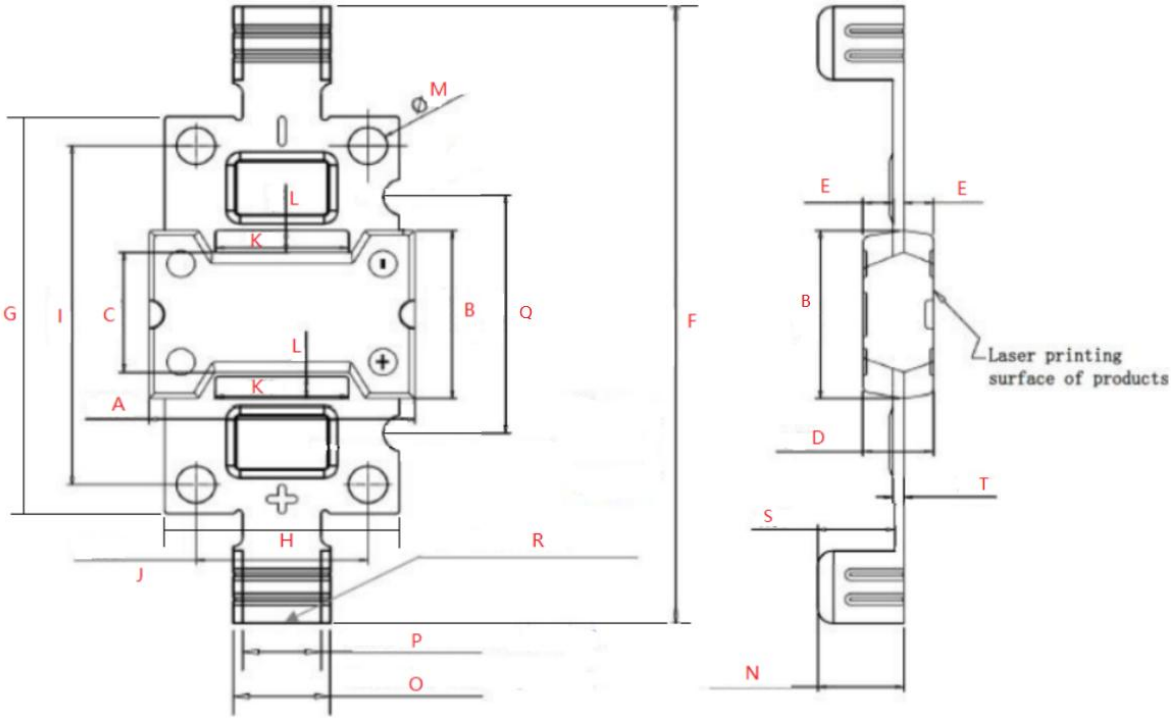
Mechanical Dimensions GFM (Millimeters)



Symbol	Dimensions in millimeters		
	Min.	Typical	Max
A	16.90	17.00	17.10
B	11.38	11.48	11.58
C	8.15	8.20	8.25
D	4.40	4.50	4.60
E	1.85	1.90	1.95
F	41.90	42.00	42.10
G	26.90	27.00	27.10
H	14.90	15.00	15.60
I	22.90	23.00	23.10
J	10.90	11.00	11.10
K	-	8.50	-
L	-	1.50	-
M	-	⌀2.50	2.55
N	5.35	5.50	5.65
O	6.20	6.30	6.40
P	4.90	5.00	5.10
Q	15.95	16.00	16.05
R	2.80	2.90	3.00
S	4.75	4.80	4.85
T	0.67	0.70	0.73

Dimension H includes Burrs/cutting residuals.

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