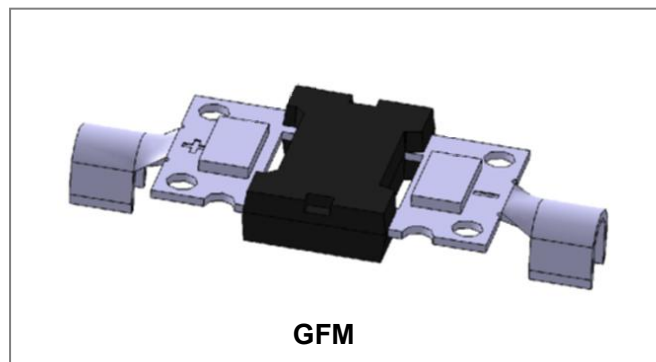


GF5045TC Power Schottky Module Bypass Diode



Features

- Low thermal resistance
- Lower forward voltage drop, low power loss
- Isolate Package design, ideal for heat dispersion
- High forward current capability
- Trench MOS Schottky technology
- 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: GF5045TC

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	$I_F (AV)$	$T_C = 111^\circ\text{C}$, 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, $T_J = 25^\circ\text{C}$	0.46	0.52	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$, $T_J = 25^\circ\text{C}$	0.05	0.5	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	8.5	-	nF

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	IN DC Forward Mode, without reverse bias, $t \leq 1$ 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

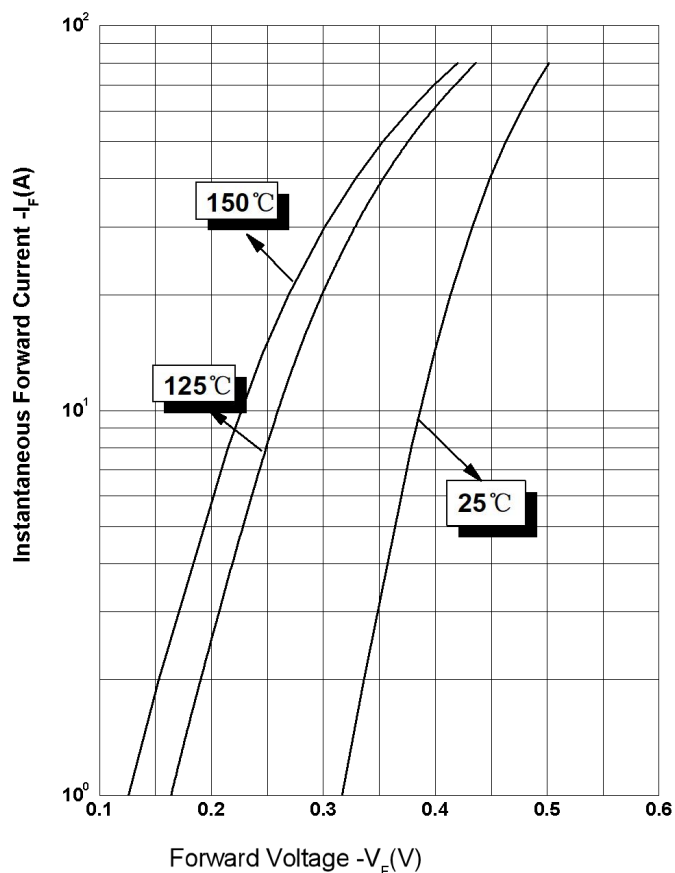


Figure 2 Typical Reverse Characteristics

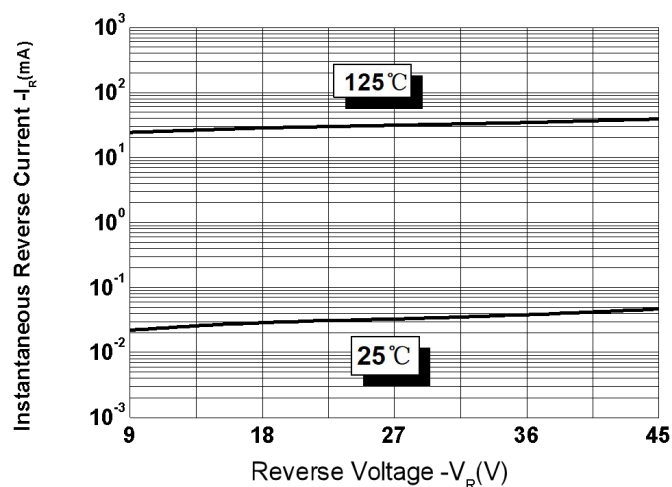
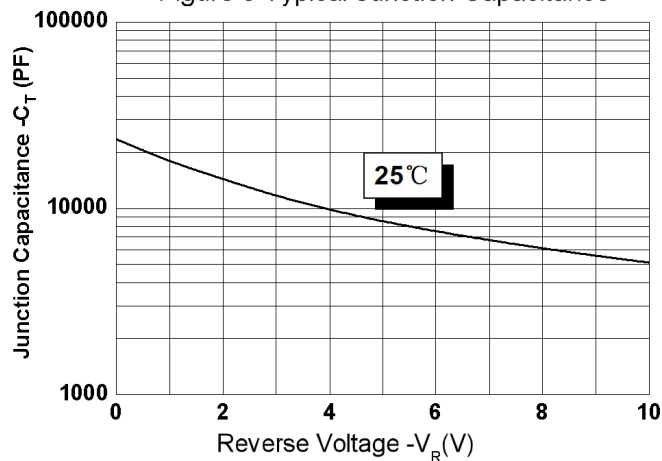


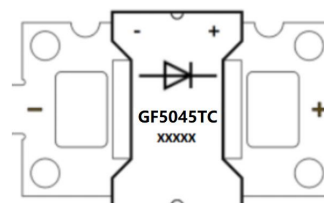
Figure 3 Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
GF5045TC	GFM	30pcs / Tube

Marking Diagram



Where XXXXX is YYWWL

GF5045TC = Marking Code
YY = Year
WW = Week
L = Lot Number

Order P/N	Terminals	Additional
GF5045TC-S1	Tin Plated	None
GF5045TC-S2	Tin Plated	Solder Paste
GF5045TC-S3	Tin Plated	Solder Block
GF5045TC-N1	Nickel Plated	None
GF5045TC-N2	Nickel Plated	Solder Paste
GF5045TC-N3	Nickel Plated	Solder Block

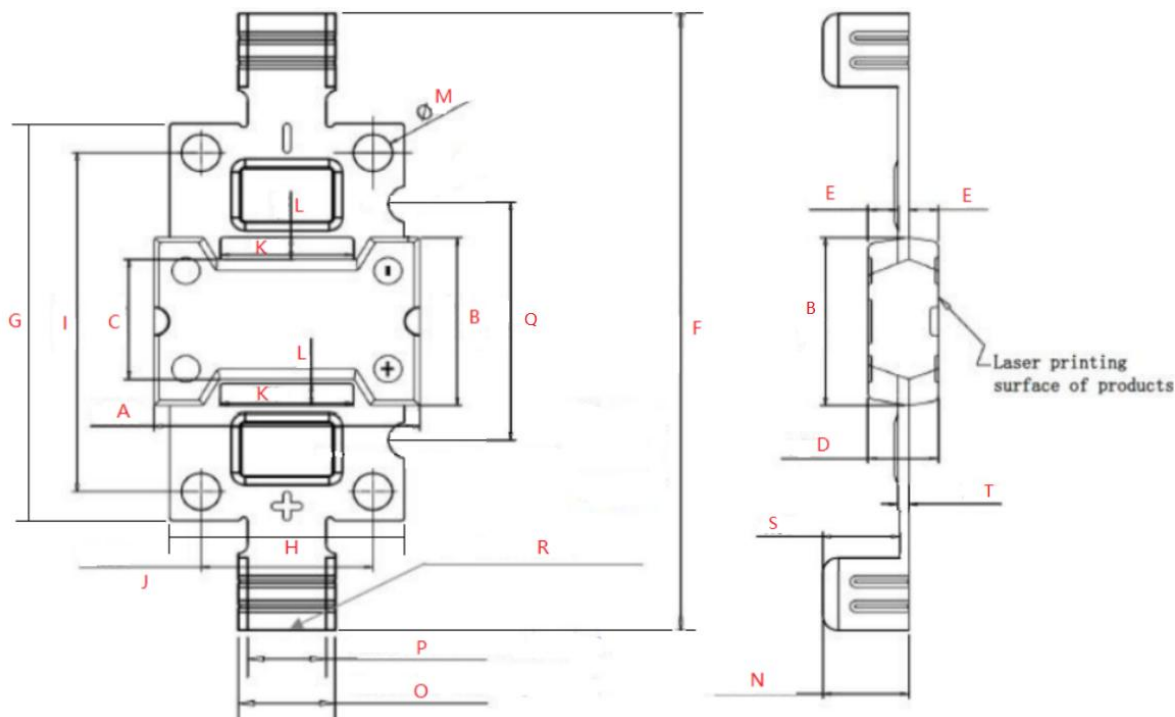


Solder Paste



Solder Block

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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