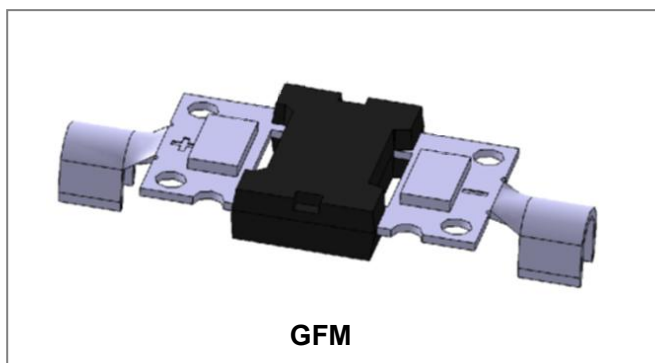


## GF4045TS Power Schottky Module Bypass Diode


**GFM**

### 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
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10 seconds
- Marking Code: GF4045TS

### 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	$I_F (AV)$	$T_C = 110^\circ\text{C}$ , In DC	40	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	350	A

### Electrical Characteristics

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 40A, Pulse, $T_J = 25^\circ\text{C}$	0.48	0.52	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.03	0.20	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 100^\circ\text{C}$	-	12	mA
	$I_{R3}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	26	55	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	5840	-	pF

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications(Ta=25°C Unless otherwise specified)**

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 Curves**

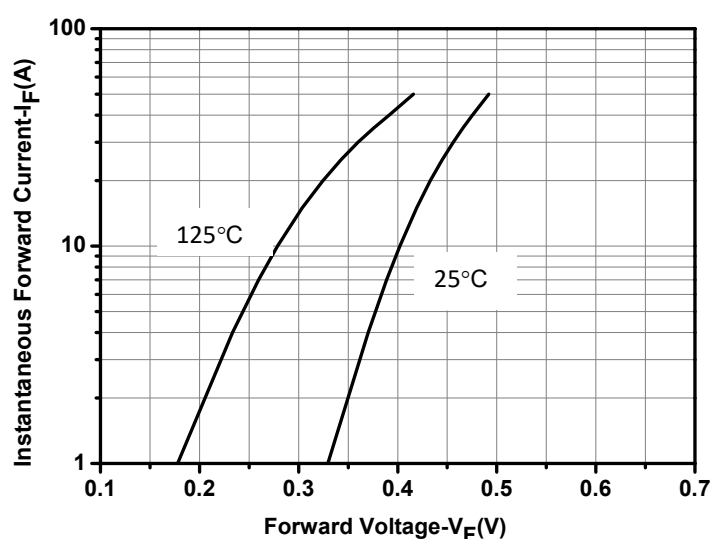


Fig.1-Typical Forward Voltage Characteristics

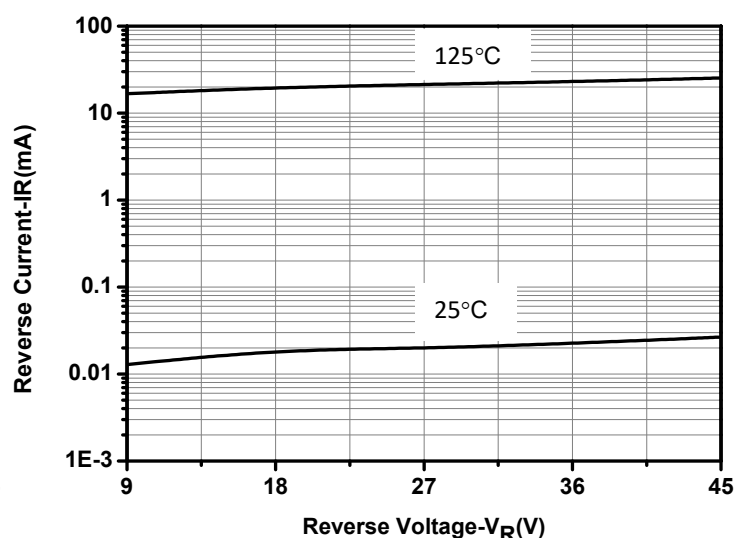


Fig.2-Typical Reverse Characteristics

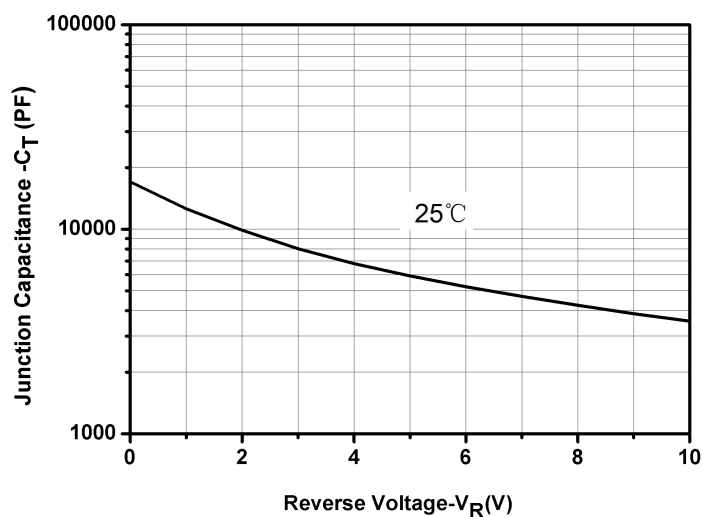
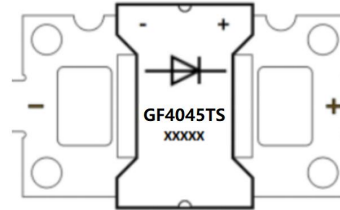


Fig.3-Capacitance vs. Reverse Voltage

## Ordering Information

Device	Package	Shipping
GF4045TS	GFM	30pcs / Tube

## Marking Diagram



Where XXXXX is YYWWL

GF4045TS = Marking Code  
YY = Year  
WW = Week  
L = Lot Number

Order P/N	Terminals	Additional
GF4045TS-S1	Tin Plated	None
GF4045TS-S2	Tin Plated	Solder Paste
GF4045TS-S3	Tin Plated	Solder Block
GF4045TS-N1	Nickel Plated	None
GF4045TS-N2	Nickel Plated	Solder Paste
GF4045TS-N3	Nickel Plated	Solder Block

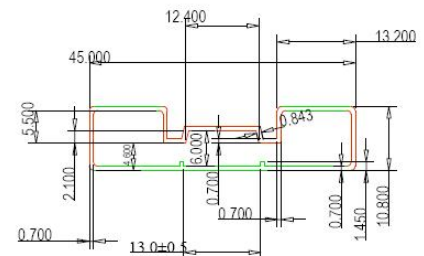
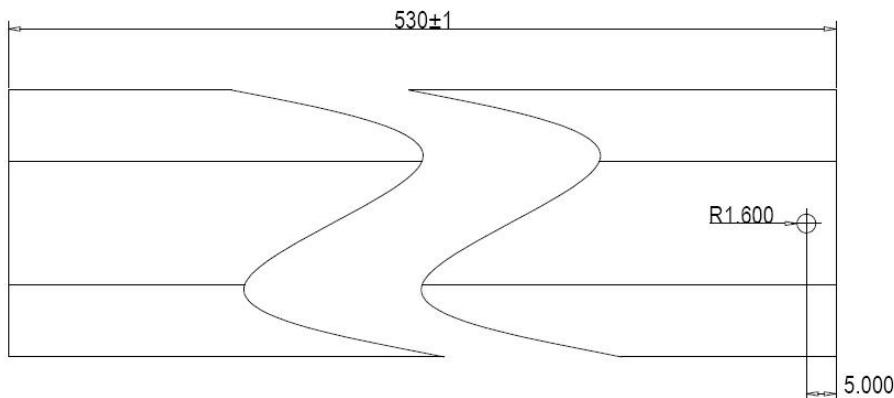


Solder Paste

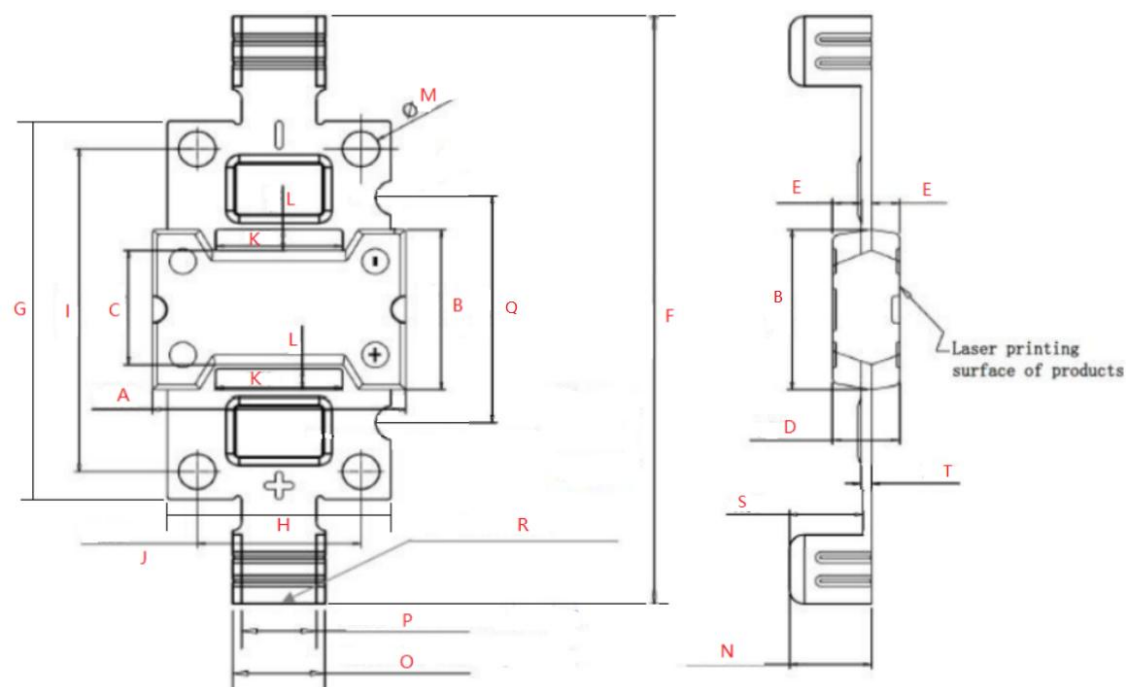


Solder Block

## Tube Specification GFM (Millimeters)



**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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