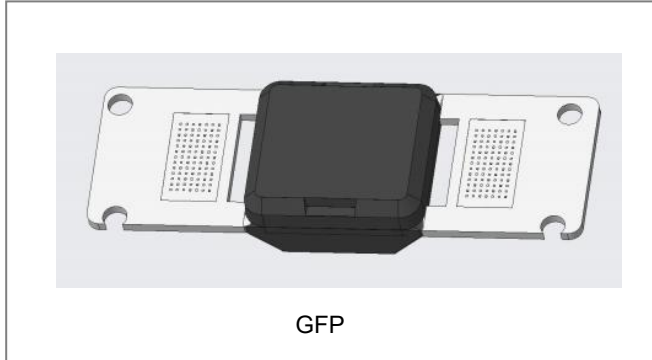


GFP4045TS Power Schottky Module Bypass Diode



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: GFP
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10 seconds
- Marking Code: GFP4045TS

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	$I_F (AV)$	$T_C = 119^\circ C$, In DC	40	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	350	A
Rating for fusing ($t < 8.3ms$)	I^2t	$T_J = 25^\circ C$	750	A ² sec

Electrical Characteristics

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 40A, Pulse, $T_J = 25^\circ C$	0.48	0.52	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	0.03	0.20	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 100^\circ C$	-	20	mA
	I_{R3}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ C$	26	55	mA
Junction Capacitance	C_T	@ $V_R = 5V$, $T_C = 25^\circ C$ $f_{SIG} = 1MHz$	5840	-	pF

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

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Technical Data
Data Sheet N2655. Draft.

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

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature IN DC Forward Mode, without reverse bias, t ≤ 1 h	T _J	-	-55 to +200	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	R _{θJC}	-	1.5	°C/W

Ratings and Characteristics Curves

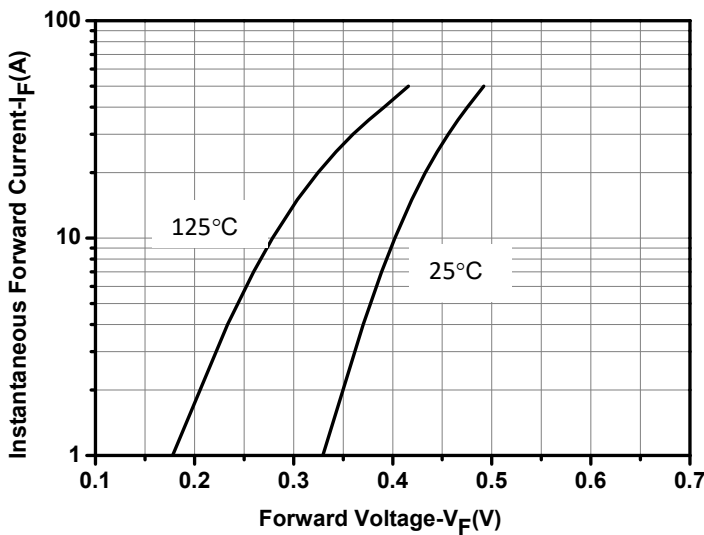


Fig.1-Typical Forward Voltage Characteristics

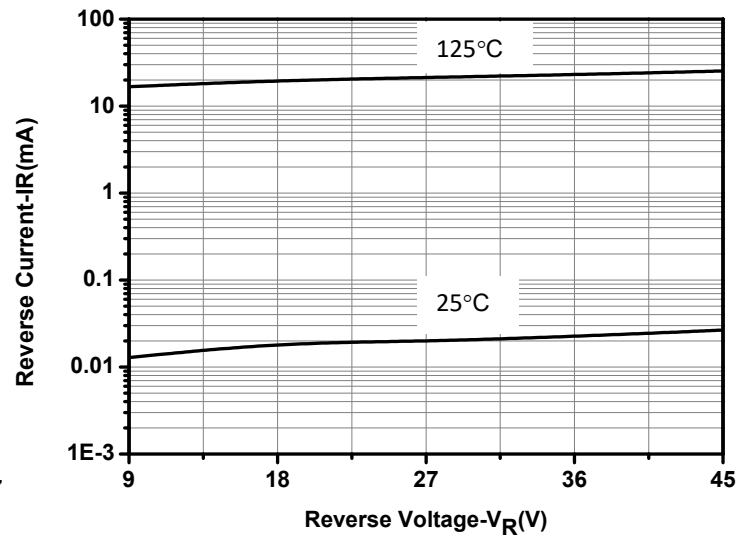


Fig.2-Typical Reverse Characteristics

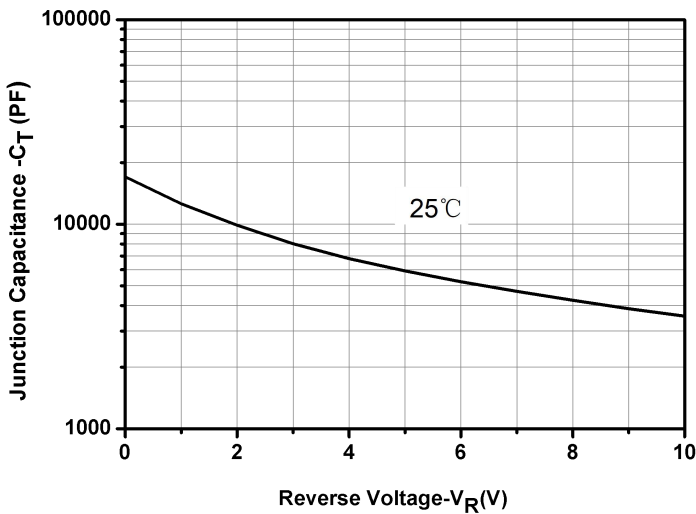


Fig.3-Capacitance vs. Reverse Voltage

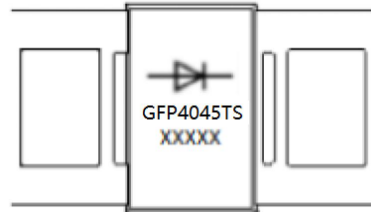
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Ordering Information

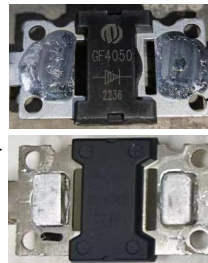
Device	Package	Shipping
GFP4045TS	GFP	36pcs/Tube

Marking Diagram



Where XXXXX is YYWWL
 GFP4045TS = Device Code
 YY = Year
 WW = Week
 L = Lot Number

Order P/N	Terminals	Additional
GFP4045TS-S1	Tin Plated	None
GFP4045TS-S2	Tin Plated	Solder Paste
GFP4045TS-S3	Tin Plated	Solder Block

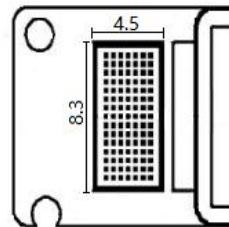


Solder Paste

Solder Block

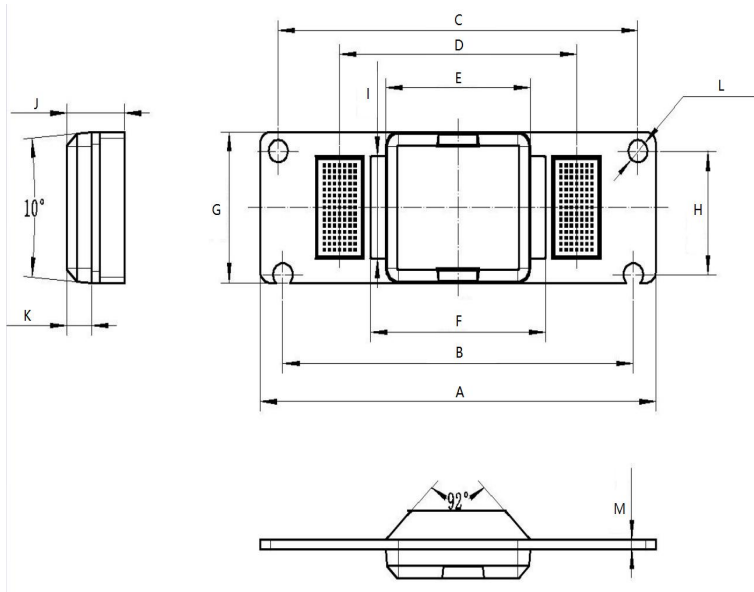
Solder block Specification

The composition of the tin block is Sn50Pb50.
 The size of the tin block is 9(-0.3)*4(-0.2)*1(±0.1) mm.
 Solder block to be centered, not exceed the flat groove.



Technical Data
Data Sheet N2655. Draft.

Mechanical Dimensions GFP (Millimeters)



Symbol	Dimensions in millimeters		
	Min.	Typical	Max
A	38.2	38.4	
B	33.85	34	34.15
C	34.75	34.9	35.05
D		22.98	
E	13.9	14	
F		17	17.1
G	12.4	12.5	
H	10.08	10.23	10.38
I		8.5	8.6
J	5.5	5.6	5.7
K	2.3	2.4	
L		4-∅ 1.9	
M	0.78	0.8	0.82

Technical Data
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