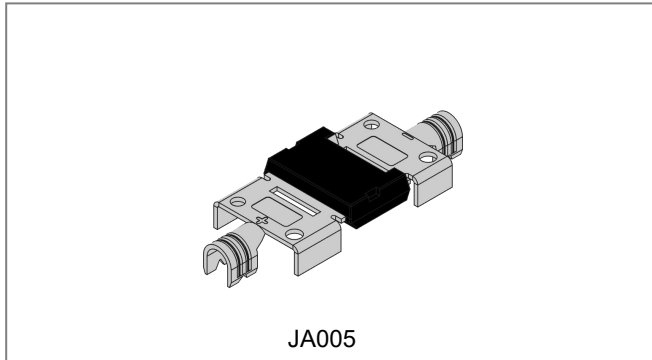


GFJ4045TS Power Schottky Module Bypass Diode



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: JA005
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10 seconds
- Marking Code: GFJ4045TS

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

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}	@ $V_R = \text{rated } V_R$, $T_J = 100^\circ\text{C}$	-	20	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 μs , duty cycle < 2%

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Technical Data
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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}	-	1.0	°C/W

Ratings and Characteristics Curves

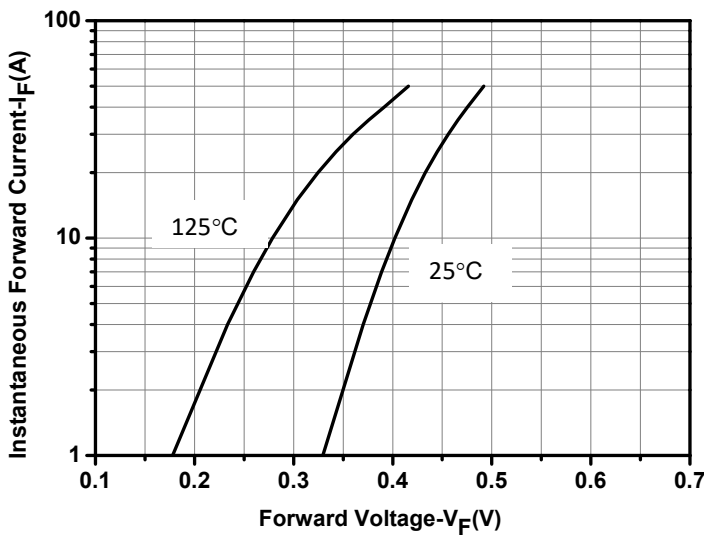


Fig.1-Typical Forward Voltage Characteristics

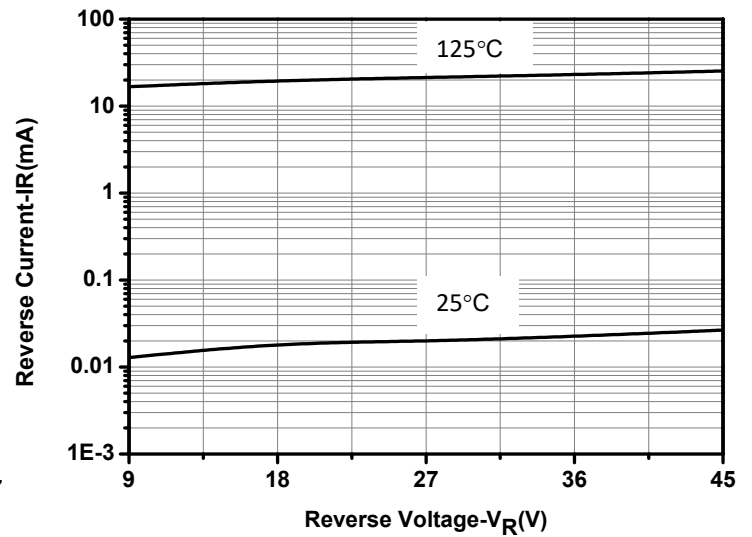


Fig.2-Typical Reverse Characteristics

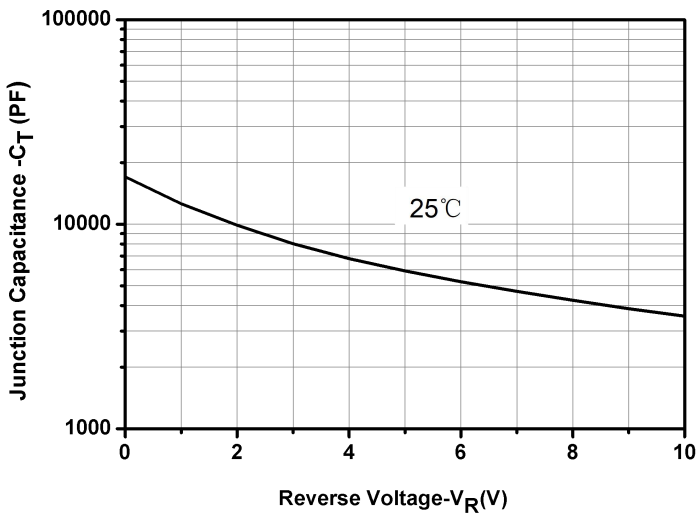


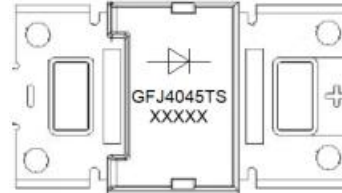
Fig.3-Capacitance vs. Reverse Voltage

Technical Data
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Ordering Information

Device	Package	Shipping
GFJ4045TS	JA005	30pcs/Tube

Marking Diagram



Where XXXXX is YYWWL
 GFJ4045TS = Device Code
 YY = Year
 WW = Week
 L = Lot Number

Order P/N	Terminals	Additional
GFJ4045TS-S1	Tin Plated	None
GFJ4045TS-S2	Tin Plated	Solder Paste
GFJ4045TS-S3	Tin Plated	Solder Block

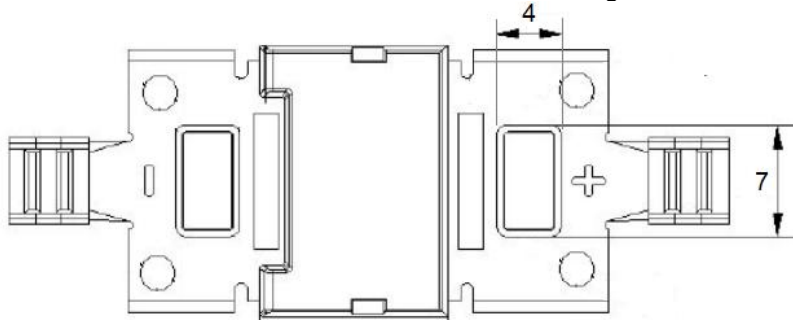


Solder Paste

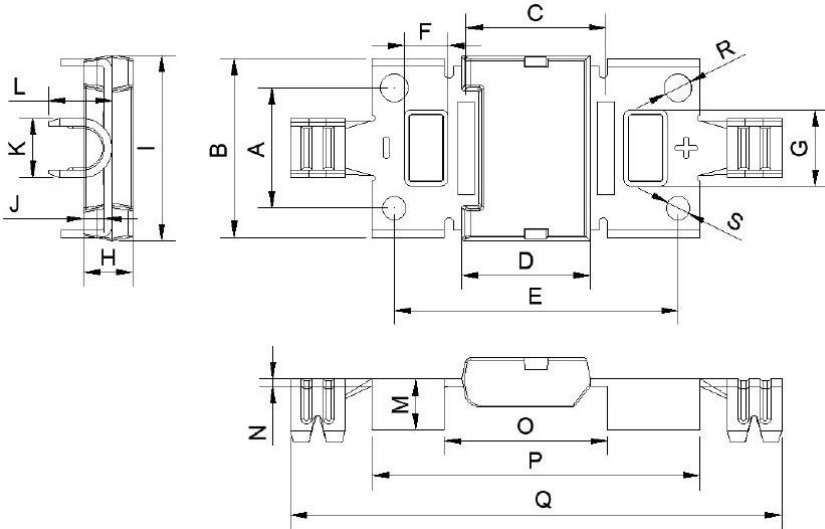
Solder Block

Solder block Specification

Tin blocks are hollow. The composition of the tin block is Sn50Pb50.
 The size of the tin block is $6(\pm 0.15) \times 3.5(\pm 0.15) \times 1(\pm 0.08)$ mm.
 The composition and size of tin blocks can be customized according to customer requirements.
 Solder block to be centered, not exceed the flat groove.



Mechanical Dimensions JA005 (Millimeters)



Symbol	Dimensions in millimeters	
	Min.	Max
A	10.5	11.5
B	15.9	16.9
C	12.6	13
D	11.23	12.23
E	25.5	26.5
F	3.5	4.5
G	6.5	7.5
H	4.3	4.7
I	16.5	17.5
J	1.7	2.1
K	5	5.8
L	5.6	6
M	4.4	5
N	0.6	0.8
O	14.73	15.13
P	29.5	30.5
Q	44.5	45.5
R	2.35	2.65
S	2	2.3

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