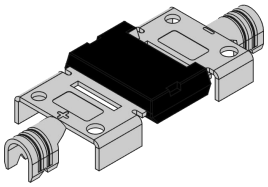
Technical Data
Data Sheet N3073 REV.-

GFJ4145TS Power Schottky Module Bypass Diode



JA005

Features

- Trench MOS Schottky technology
- 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: JA005
- High temperature soldering guaranteed
- Heated-tool welding 260˚C,10 seconds
- Marking Code: GFJ4145TS

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=119˚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 ˚C	750	A^2sec

Electrical Characteristics

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 40A, Pulse, T_J = 25˚C	0.50	0.52	V
Reverse Current*	I_{R1}	@V_R = rated V_R T_J = 25˚C	0.01	0.20	mA
	I_{R2}	@V_R = rated V_R T_J = 100 ˚C	-	20	mA
	I_{R3}	@V_R = rated V_R T_J = 125˚C	19	55	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25˚C f_{SIG} = 1MHz	3831	-	pF

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

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

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	IN DC Forward Mode, without reverse bias, t ≤1 h	-55 to +200	℃
Storage Temperature	T_{stg}	-	-55 to +150	℃
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	-	1.0	℃/W

Ratings and Characteristics Curves

Figure1 Typical Forward Characteristics

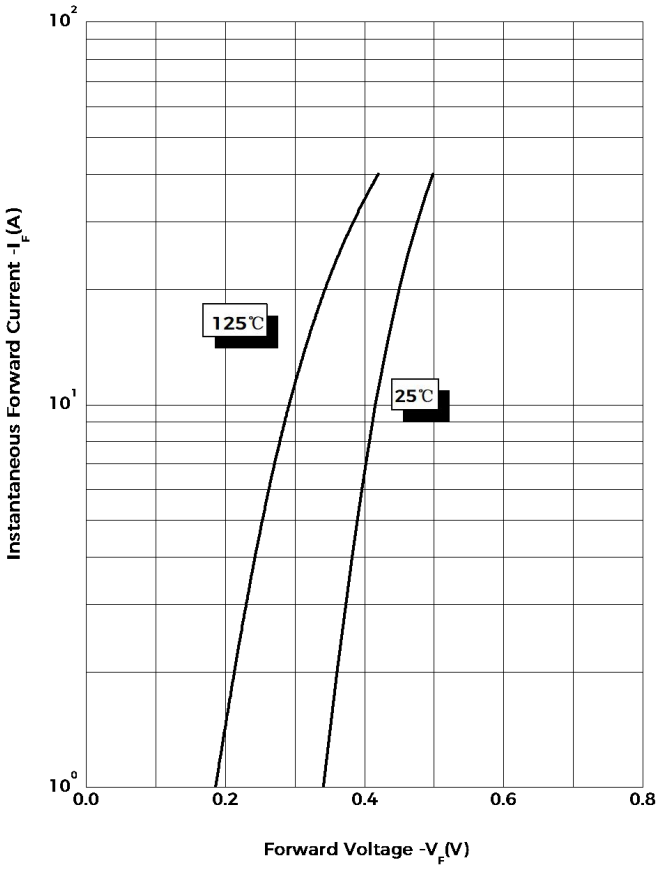


Figure 2 Typical Reverse Characteristics

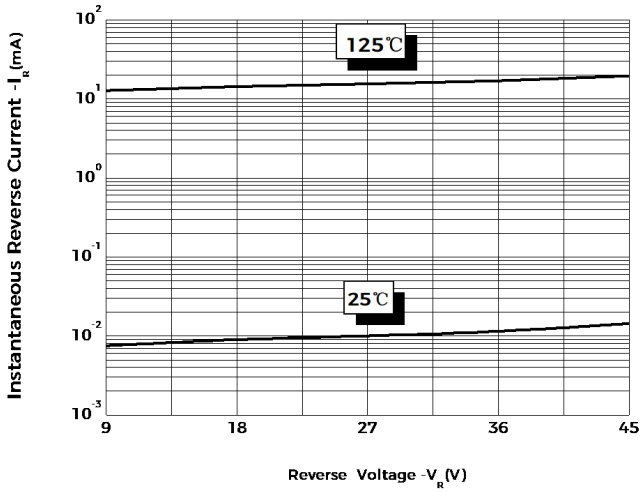
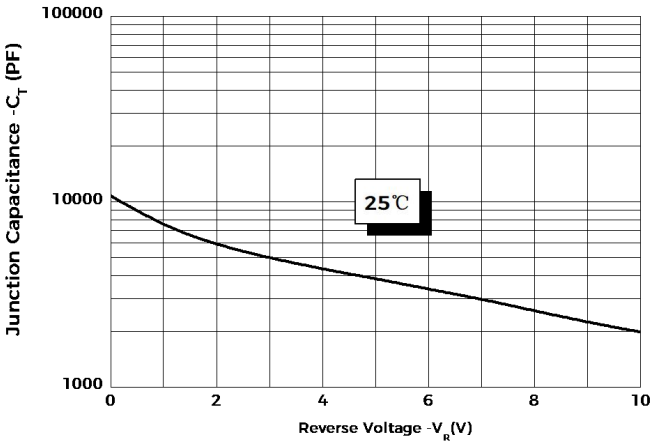


Figure 3 Typical Junction Capacitance



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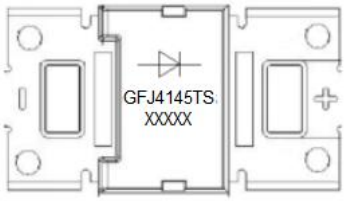
Ordering Information

Device	Package	Shipping
GFJ4145TS	JA005	30pcs/Tube

Marking Diagram



Where XXXXX is YYWWL

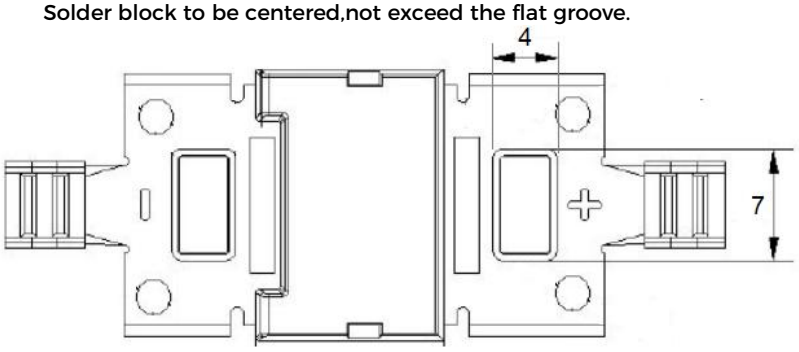
GFJ4145TS = Device Code
YY = Year
WW = Week
L = Lot Number

Order P/N	Terminals	Additional
GFJ4145TS-S1	Tin Plated	None
GFJ4145TS-S3	Tin Plated	Solder Block

Solder Block

Solder block Specification

The composition of the tin block is Sn50Pb50 with flux.
The size of the tin block is 6(±0.15)*3.5(±0.15)*1(±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.



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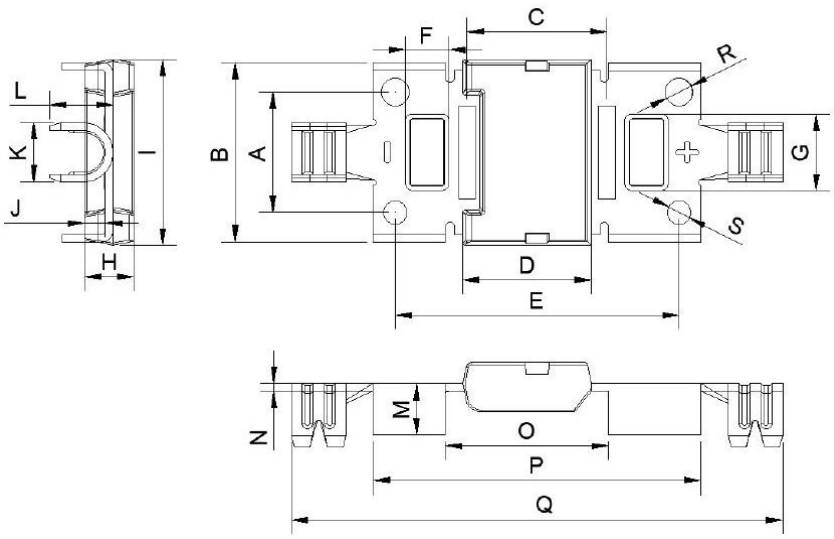
Mechanical Dimensions JA005 (Millimeters)



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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