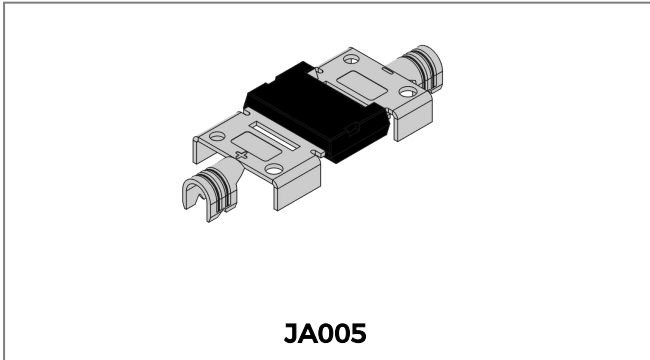


## GFJ7145TC Power Schottky Module Bypass Diode



### 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
- Terminals: Copper
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10seconds
- Marking Code: GFJ7145TC

### 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	$I_{F(AV)}$	$T_C=95^\circ\text{C}$ , In DC	70	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*	$V_{F1}$	@ 70A, Pulse, $T_J = 25^\circ\text{C}$	0.47	0.52	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ , $T_J = 25^\circ\text{C}$	0.04	0.20	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , $T_J = 100^\circ\text{C}$	-	60	mA
	$I_{R3}$	@ $V_R = \text{rated } V_R$ , $T_J = 125^\circ\text{C}$	-	120	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	8776	-	pF

\* Pulse width < 300  $\mu\text{s}$ , 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	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	-	1	$^{\circ}\text{C}/\text{W}$

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

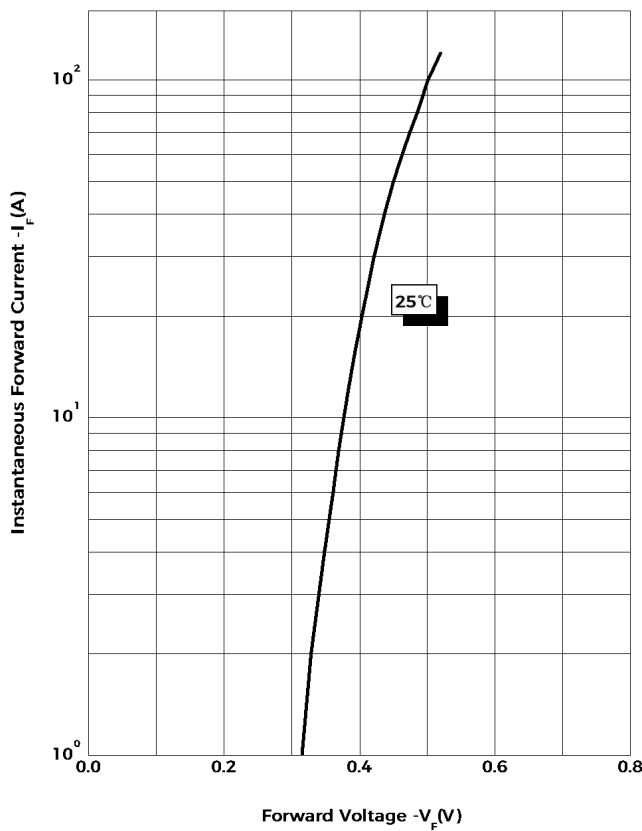


Figure 2 Typical Reverse Characteristics

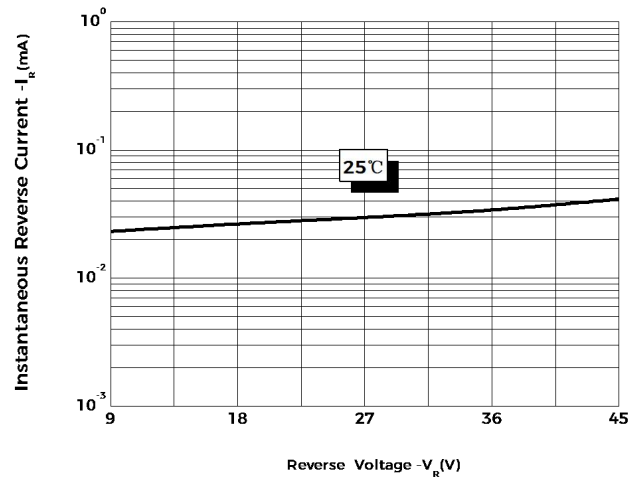
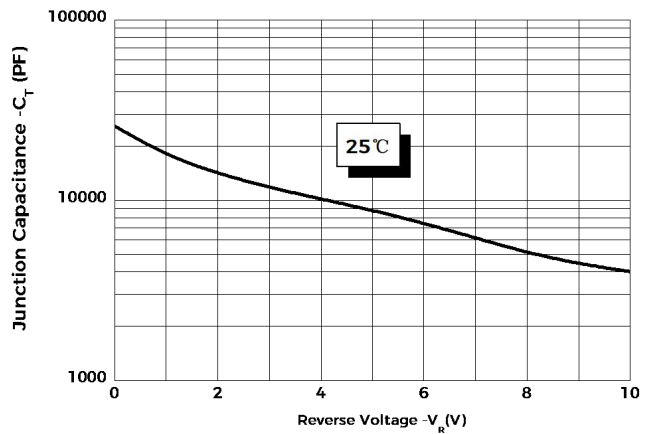


Figure 3 Typical Junction Capacitance

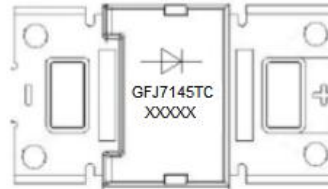


Technical Data  
Data Sheet N3193, Rev.-

**Ordering Information**

Device	Package	Shipping
GFJ7145TC	JA005	30pcs/Tube

**Marking Diagram**



Where XXXXX is YYWWL

GFJ7145TC = Device Code  
YY = Year  
WW = Week

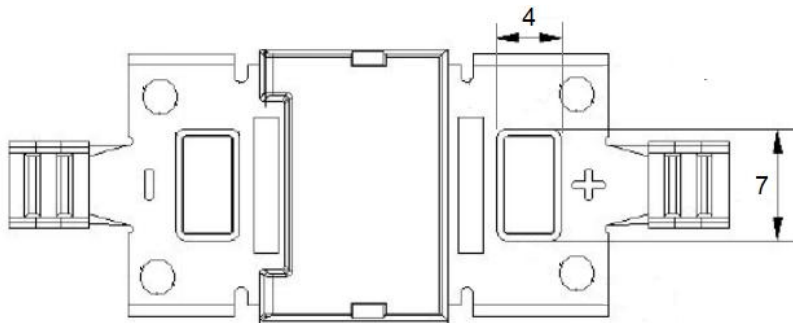
Order P/N	Terminals	Additional
GFJ7145TC-S1	Tin Plated	None
GFJ7145TC-S3	Tin Plated	Solder Block



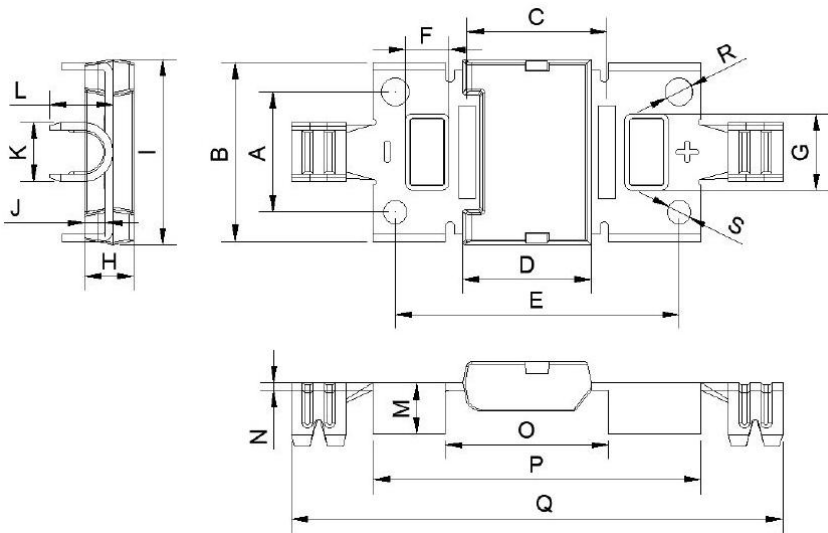
Solder Block

**Solder block Specification**

The composition of the tin block is Sn50Pb50 with flux.  
The size of the tin block is  $6(\pm 0.15) \times 3.5(\pm 0.15) \times 1(\pm 0.08)$  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

**Technical Data**  
**Data Sheet N3193, Rev.-**

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