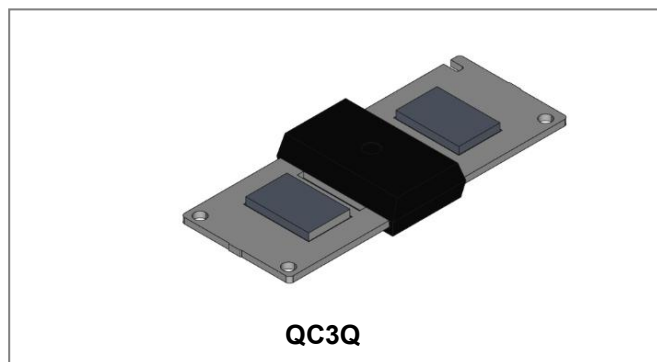


## GF3545TS-1 Power Schottky Module Bypass Diode



### 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: QC3Q
- High temperature soldering guaranteed
- Heated-tool welding 260°C, 10 seconds
- Marking Code: GF3545TS-1

### Maximum Ratings(Ta=25°C Unless otherwise specified)

| Characteristics  | Symbol                          | Condition   | Max. | Units              |
|--|---------------------------------|---|------|--------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | -   | 45   | V                  |
| Average Rectified Forward Current  | $I_F (AV)$                      | $T_C = 123^\circ\text{C}$ , In DC                 | 35   | A                  |
| Peak One Cycle Non-Repetitive Surge Current  | $I_{FSM}$                       | 8.3 ms, half Sine pulse, $T_J = 25^\circ\text{C}$ | 350  | A                  |
| Rating for fusing ( $t < 8.3\text{ms}$ )   | $I^2t$                          | $T_J = 25^\circ\text{C}$                          | 500  | A <sup>2</sup> sec |

### Electrical Characteristics(Ta=25°C Unless otherwise specified)

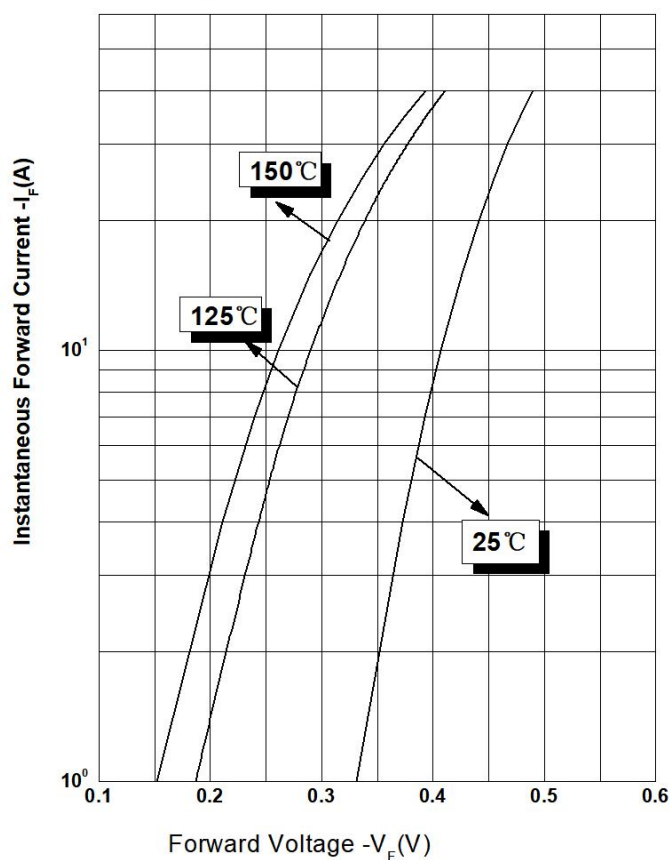
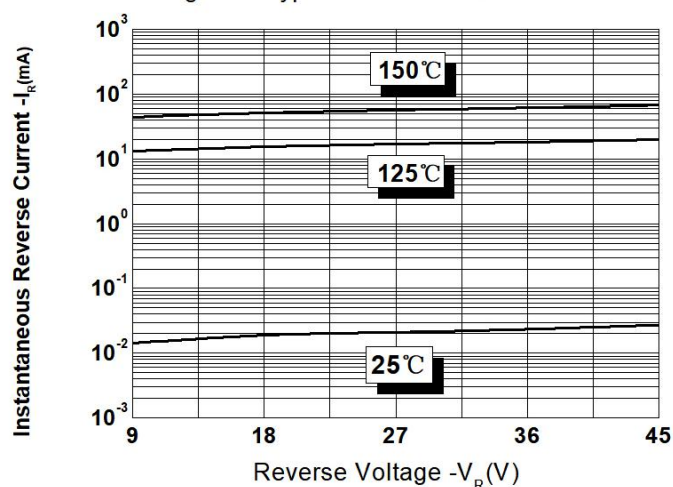
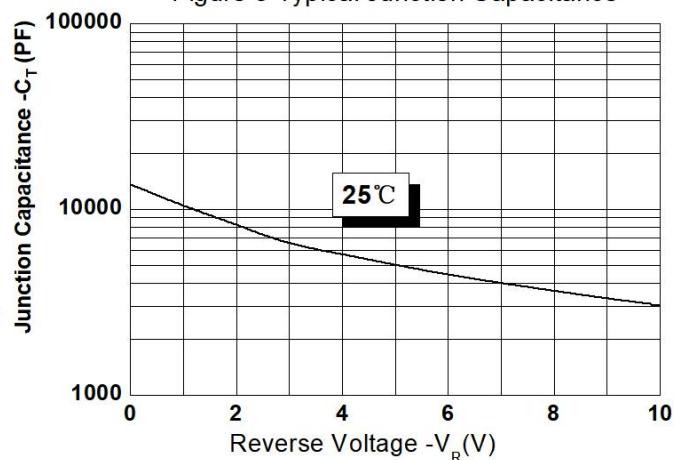
| Characteristics       | Symbol   | Condition   | Typ. | Max. | Units |
|-----------------------|----------|---|------|------|-------|
| Forward Voltage Drop* | $V_{F1}$ | @ 35A, Pulse, $T_J = 25^\circ\text{C}$                                    | 0.48 | 0.52 | V     |
| Reverse Current*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$                      | 0.03 | 0.20 | mA    |
|                       | $I_{R2}$ | @ $V_R = \text{rated } V_R$ $T_J = 100^\circ\text{C}$                     | -    | 12   | mA    |
|                       | $I_{R3}$ | @ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$                     | 20   | 55   | mA    |
| Junction Capacitance  | $C_T$    | @ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ | 5000 | -    | pF    |

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

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**Technical Data**  
**Data Sheet N2639, Rev.-**
**Thermal-Mechanical Specifications(Ta=25°C Unless otherwise specified)**

| Characteristics                             | Symbol          | Condition   | Specification | Units |
|---|-----------------|---|---------------|-------|
| Junction Temperature                        | $T_J$           | IN DC Forward Mode,<br>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  |

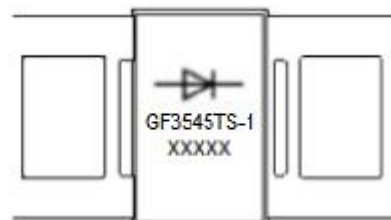
**Ratings and Characteristics Curves**
**Figure1 Typical Forward Characteristics**

**Figure 2 Typical Reverse Characteristics**

**Figure 3 Typical Junction Capacitance**


**Technical Data**  
**Data Sheet N2639, Rev.-**

**Ordering Information**

| Device     | Package | Shipping   |
|------------|---------|------------|
| GF3545TS-1 | QC3Q    | 32pcs/Tube |

**Marking Diagram**



Where XXXXX is YYWWL

GF3545TS-1 = Device Code  
YY = Year  
WW = Week  
L = Lot Number

| Order P/N     | Terminals     | Additional   |
|---------------|---------------|--------------|
| GF3545TS-1-S1 | Tin Plated    | None         |
| GF3545TS-1-S2 | Tin Plated    | Solder Paste |
| GF3545TS-1-S3 | Tin Plated    | Solder Block |
| GF3545TS-1-N1 | Nickel Plated | None         |
| GF3545TS-1-N2 | Nickel Plated | Solder Paste |
| GF3545TS-1-N3 | Nickel Plated | Solder Block |

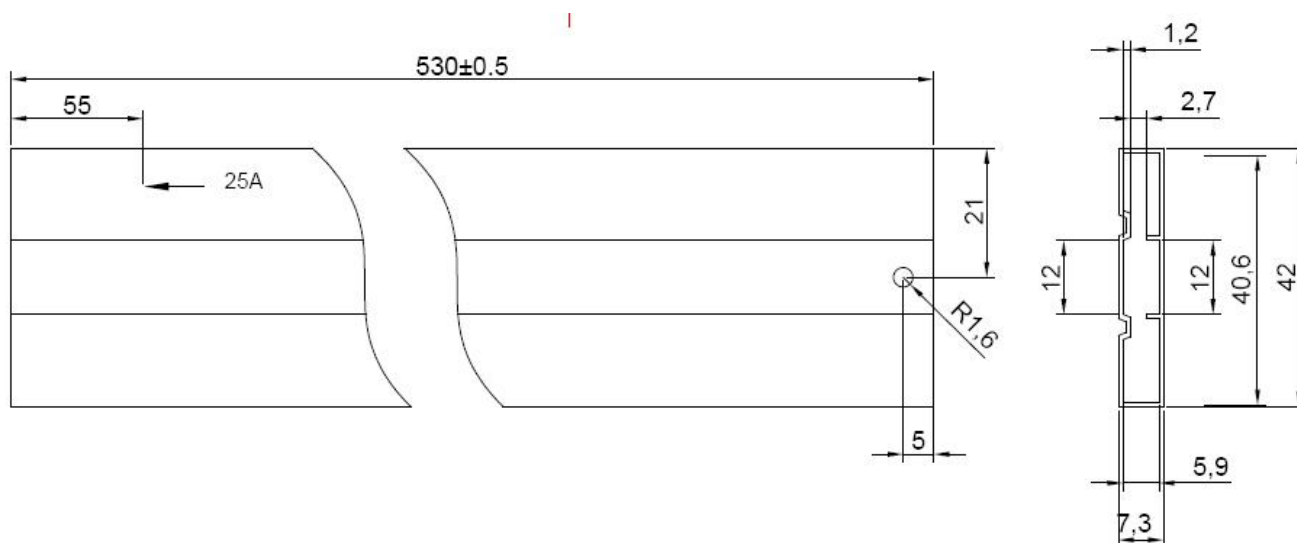


Solder Paste

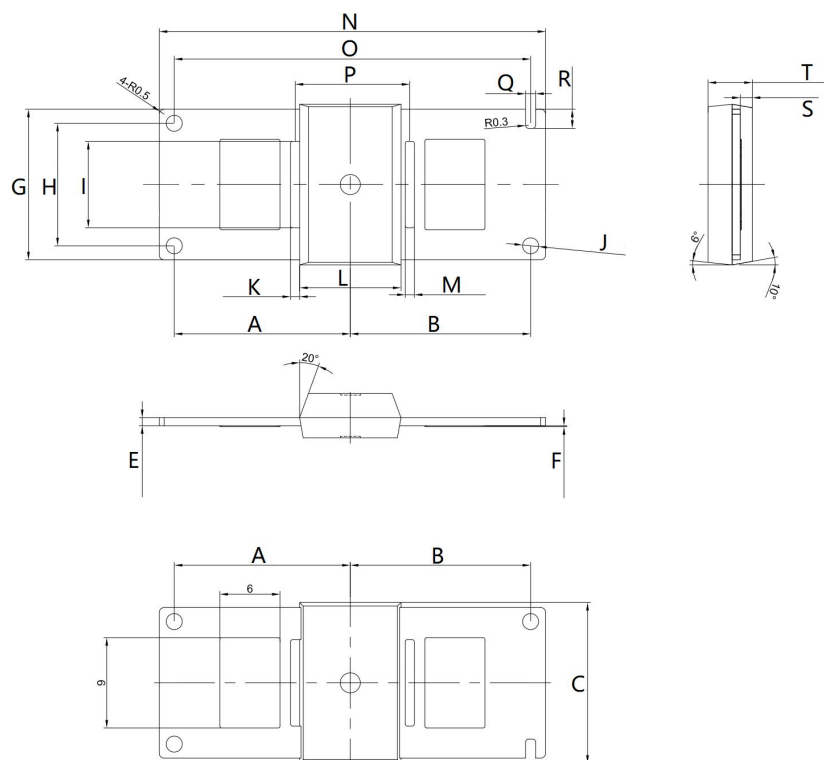


Solder Block

**Tube Specification QC3Q (Millimeters)**



**Mechanical Dimensions QC3Q (Millimeters)**



| Symbol | Dimensions in millimeters |         |       |
|--------|---------------------------|---------|-------|
|        | Min.                      | Typical | Max   |
| A      |                           | 17.54   |       |
| B      |                           | 17.96   |       |
| C      | 15.90                     | 16.00   | 16.10 |
| E      | 0.77                      | 0.80    | 0.83  |
| F      | 0.08                      | 0.10    | 0.12  |
| G      | 14.90                     | 15.00   | 15.10 |
| H      | 12.15                     | 12.20   | 12.25 |
| I      | 8.55                      | 8.60    | 8.65  |
| J      |                           | 1.60    | 1.70  |
| K      | 0.86                      | 0.90    | 0.93  |
| L      | 10.00                     | 10.10   | 10.20 |
| M      | 0.87                      | 0.90    | 0.93  |
| N      | 38.40                     | 38.50   | 38.60 |
| O      | 35.45                     | 35.50   | 35.55 |
| P      | 11.32                     | 11.42   | 11.52 |
| Q      |                           | 1.00    | 1.10  |
| R      |                           | 1.90    | 2.00  |
| S      | 1.15                      | 1.20    | 1.25  |
| T      | 4.30                      | 4.40    | 4.50  |

**Technical Data**  
**Data Sheet N2639, Rev.-**

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