

**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 100 to 1000 V**

**Forward Current - 8A**

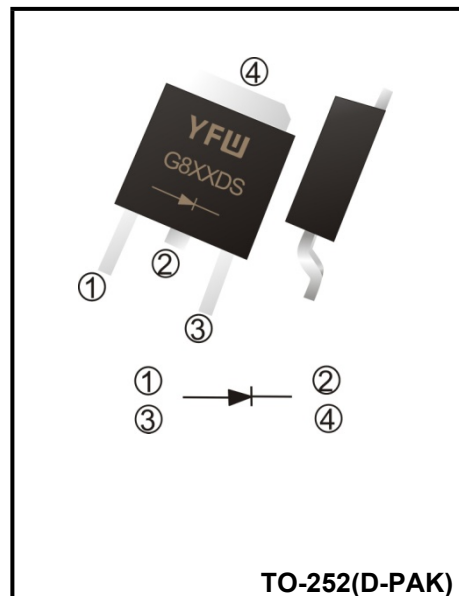
**FEATURES**

- ♦High current capability
- ♦Low forward voltage drop
- ♦Glass Passivated Chip Junction
- ♦Low power loss, high efficiency
- ♦Lead free in comply with EU RoHS 2011/65/EU directives



**MECHANICAL DATA**

- ♦Case: TO-252(D-PAK)
- ♦Terminals: Solderable per MIL-STD-750, Method 2026
- ♦Approx. Weight: 0.32g / 0.011oz



**Maximum Ratings and Electrical characteristics**

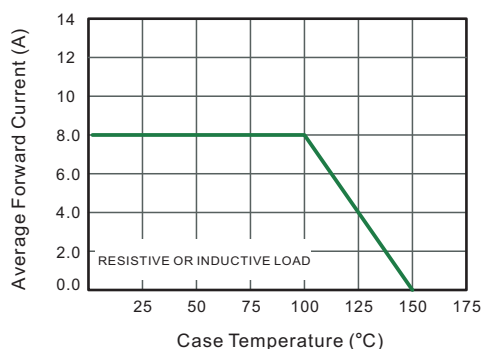
Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter                                                                                                                         | Symbols         | G801DS     | G802DS | G804DS | G806DS | G808DS | G810DS | Units                |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|--------|--------|--------|--------|--------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                           | $V_{RRM}$       | 100        | 200    | 400    | 600    | 800    | 1000   | V                    |
| Maximum RMS voltage                                                                                                               | $V_{RMS}$       | 70         | 140    | 280    | 420    | 560    | 700    | V                    |
| Maximum DC Blocking Voltage                                                                                                       | $V_{DC}$        | 100        | 200    | 400    | 600    | 800    | 1000   | V                    |
| Maximum Average Forward Rectified Current                                                                                         | $I_{F(AV)}$     | 8          |        |        |        |        |        | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC method)                                  | $I_{FSM}$       | 170        |        |        |        |        |        | A                    |
| Maximum Instantaneous Forward Voltage at 8A DC                                                                                    | $V_F$           | 1.1        |        |        |        |        |        | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$           | 5<br>500   |        |        |        |        |        | $\mu\text{A}$        |
| Typical Junction Capacitance <sup>(1)</sup>                                                                                       | $C_j$           | 50         |        |        |        |        |        | pF                   |
| Typical Thermal Resistance <sup>(2)</sup>                                                                                         | $R_{\theta JA}$ | 25         |        |        |        |        |        | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                           | $T_j, T_{stg}$  | -55 ~ +150 |        |        |        |        |        | $^{\circ}\text{C}$   |

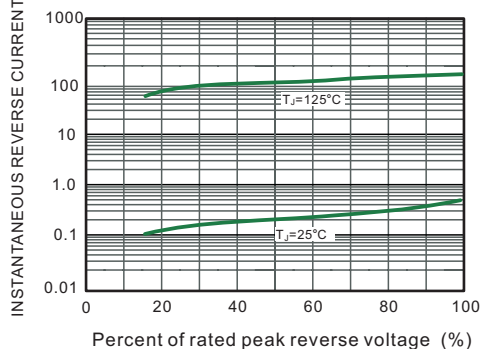
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.

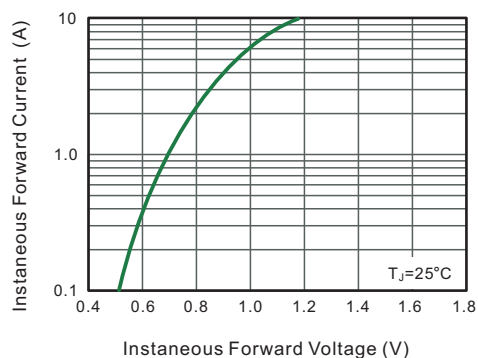
**Fig.1 Forward Current Derating Curve**



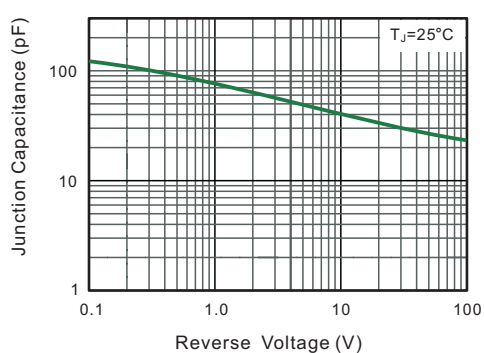
**Fig.2 Typical Instantaneous Reverse Characteristics**



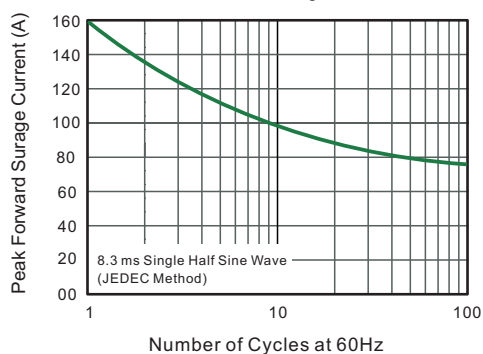
**Fig.3 Typical Forward Characteristic**



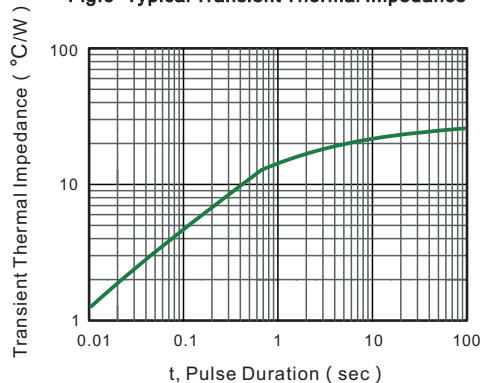
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

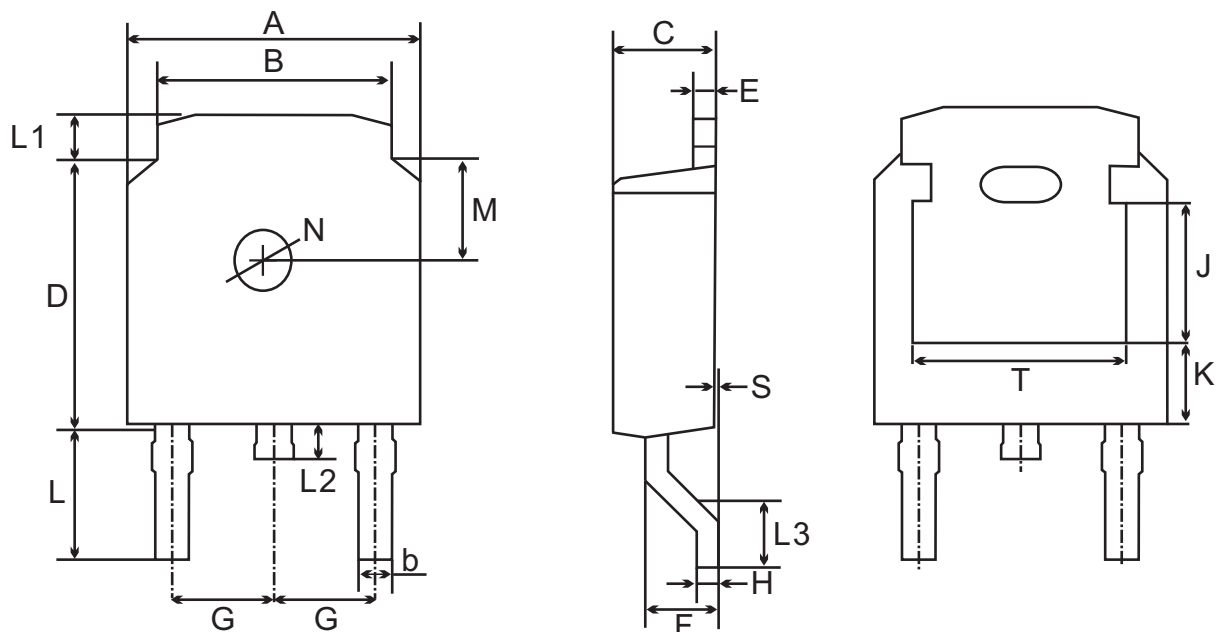


**Fig.6- Typical Transient Thermal Impedance**



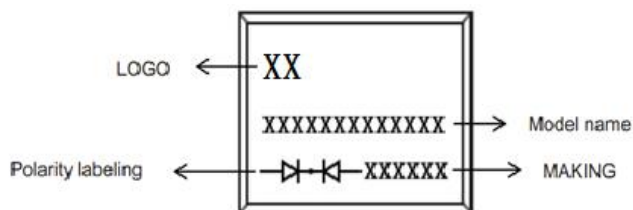
**Package Outline**

**TO-252(D-PAK)**



| UNIT |     | A   | B   | b   | C   | D   | E   | F   | G               | H    | L   | L1  | L2  | L3   | S   | M              | N              | J    | K    | T    |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|------|-----|-----|-----|------|-----|----------------|----------------|------|------|------|
| mm   | max | 6.7 | 5.5 | 0.8 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29<br>TYPICAL | 0.55 | 3.1 | 1.2 | 1.0 | 1.75 | 0.1 | 1.8<br>TYPICAL | 1.3<br>TYPICAL | 3.16 | 1.80 | 4.83 |
|      | min | 6.3 | 5.1 | 0.3 | 2.1 | 5.9 | 0.4 | 1.3 |                 | 0.45 | 2.7 | 0.8 | 0.6 | 1.40 | 0.0 |                |                | ref. | ref. | ref. |
| mil  | max | 264 | 217 | 31  | 98  | 248 | 24  | 71  | 90<br>TYPICAL   | 22   | 122 | 47  | 39  | 69   | 4   | 71<br>TYPICAL  | 51<br>TYPICAL  | 124  | 71   | 190  |
|      | min | 248 | 201 | 12  | 83  | 232 | 16  | 51  |                 | 18   | 106 | 31  | 24  | 55   | 0   |                |                | ref. | ref. | ref. |

**Marking on the body**



**MAKING:**

XXXXXX

Assembly code ( e.g : AB,CD,..... )

Material –Code  
(H:No halogen A:ordinary)

Week – code (WW:01~52)

Year – code  
(Y: Last digit of year & A:2012,B:2013. . . )

**Summary of Packing Options**

| Package       | Packing Description | Packing Quantity | Industry Standard |
|---------------|---------------------|------------------|-------------------|
| TO-252(D-PAK) | Tape/Reel,13"reel   | 2500             | EIA-481-1         |