

**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 100 to 1000 V**

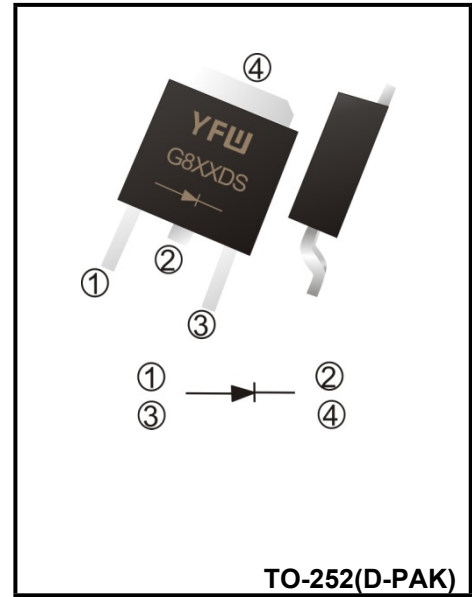
**Forward Current - 8A**

**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**

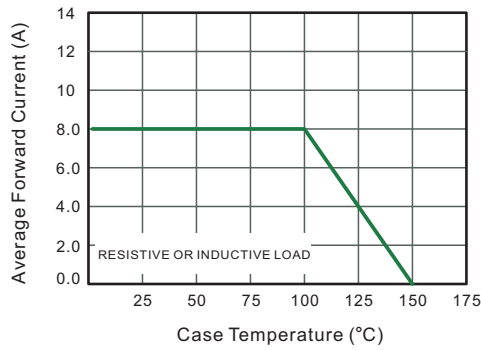
Ratings at 25 °C ambient temperature unless otherwise specified.

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 $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=125\text{ }^\circ\text{C}$	$I_R$	5 500						$\mu\text{A}$
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						$^\circ\text{C}$

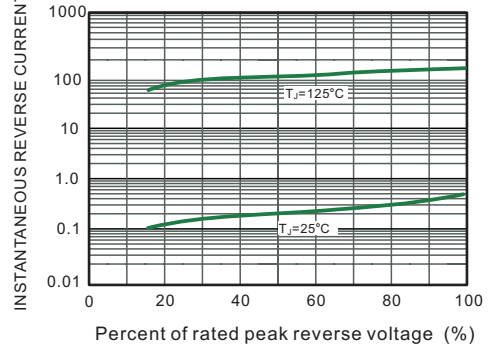
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

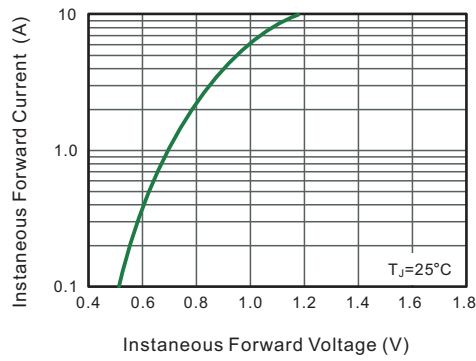
**Fig.1 Forward Current Derating Curve**



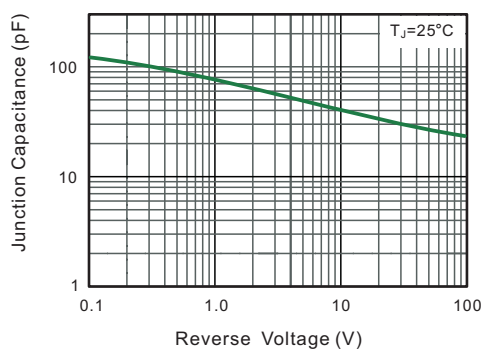
**Fig.2 Typical Instantaneous Reverse Characteristics**



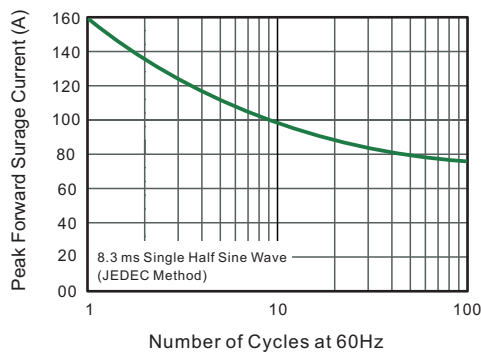
**Fig.3 Typical Forward Characteristic**



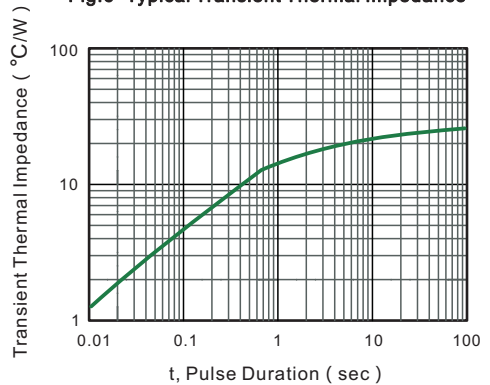
**Fig.4 Typical Junction Capacitance**



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

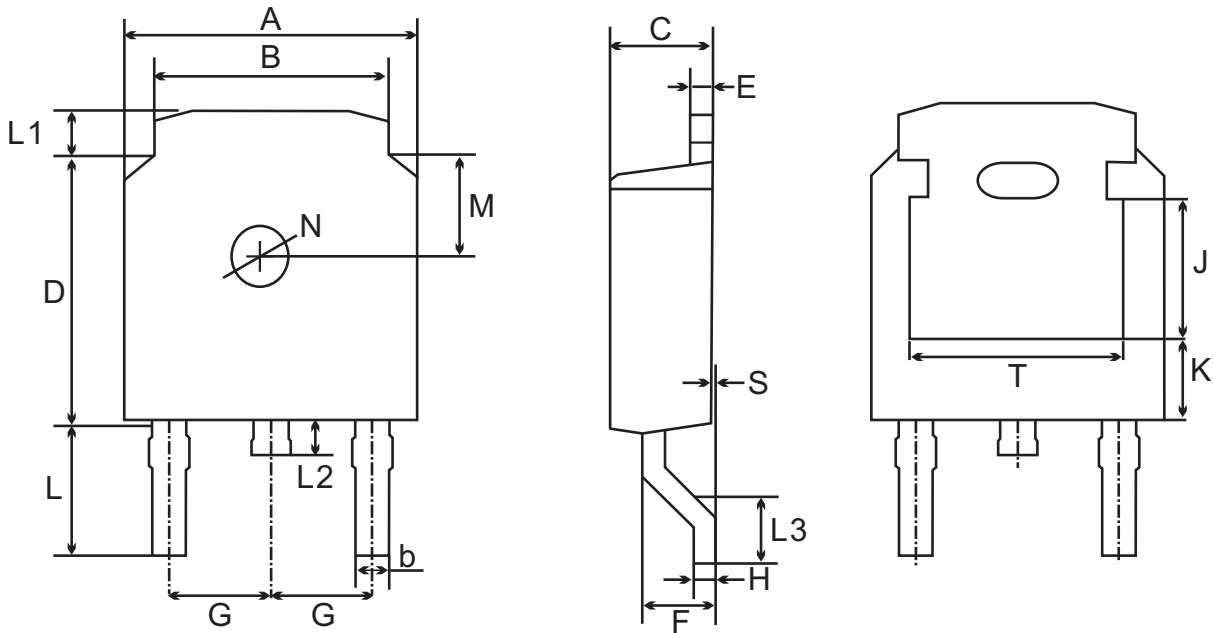


**Fig.6- Typical Transient Thermal Impedance**



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 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.1	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	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					
mil	max	264	217	31	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124 ref.	71 ref.	190 ref.
	min	248	201	12	83	232	16	51		18	106	31	24	55	0					

Summary of Packing Options

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