



**GLASS PASSIVATED RECTIFIERS**

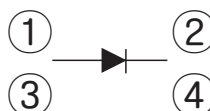
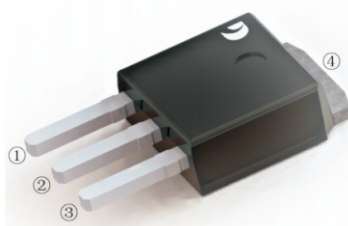
Reverse Voltage - 100 to 1000 V

Forward Current - 5.0 A

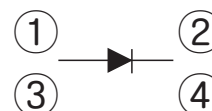
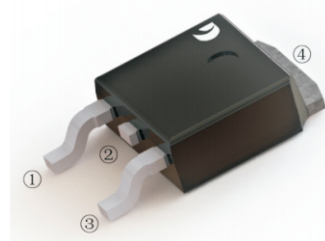
**FEATURES**

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

**TO-251(I-PAK)**



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



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified

CHARACTERISTICS	TO-251	G501VY	G502VY	G504VY	G506VY	G508VY	G510VY	Units
	TO-252	G501DY	G502DY	G504DY	G506DY	G508DY	G510DY	
Maximum Recurrent 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	$I_{F(AV)}$	5.0						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150						A
Max Instantaneous Forward Voltage at 5 A DC	$V_F$	1.1						V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	$I_R$	5 500						$\mu\text{A}$
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	60						pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	50						$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	-55 ~ +150						$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-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 Typical Forward Current Derating Curve

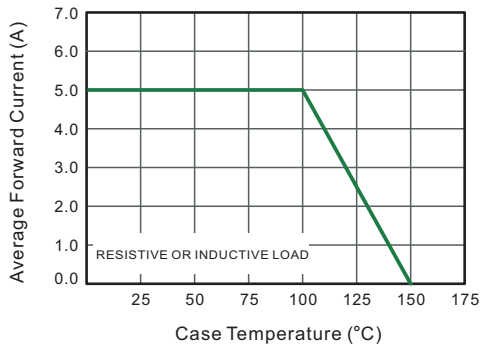


Fig.2 Typical Instantaneous Reverse Characteristics

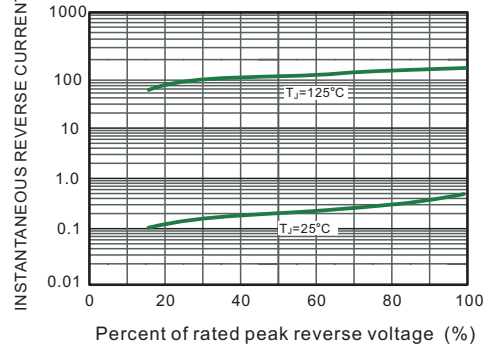


Fig.3 Typical Forward Characteristic

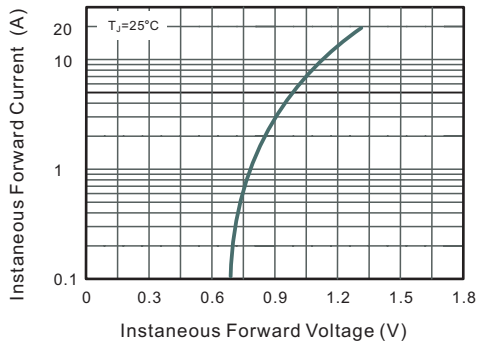


Fig.4 Typical Junction Capacitance

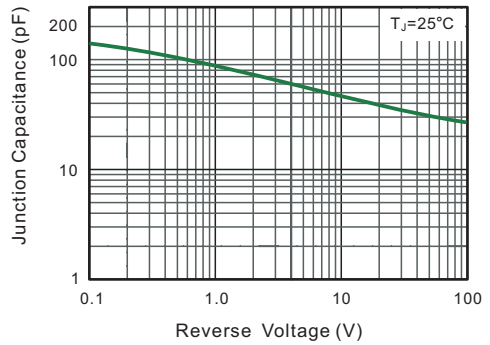


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

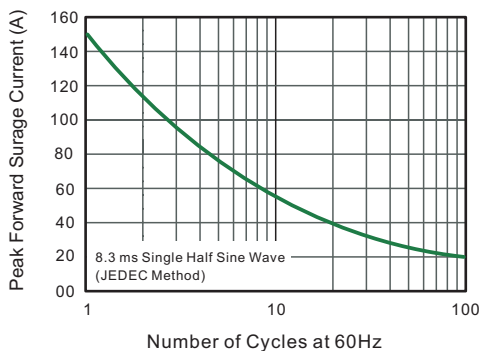
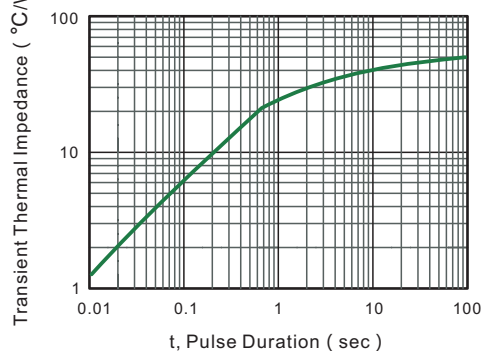
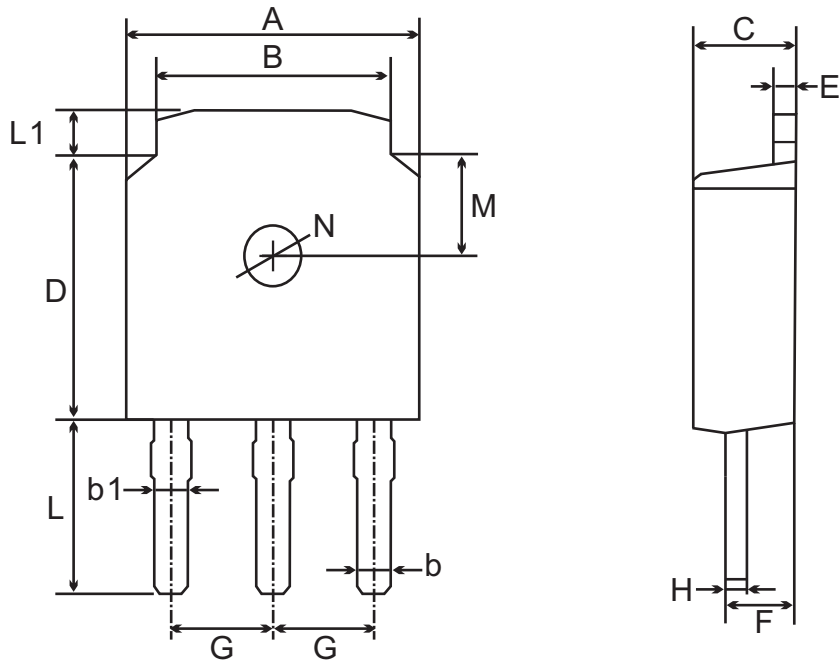


Fig.6- Typical Transient Thermal Impedance





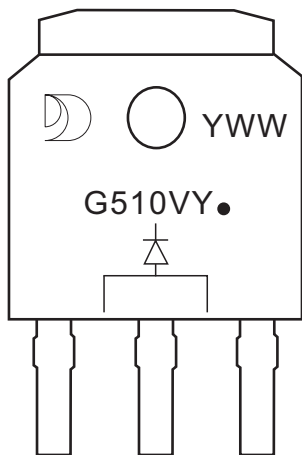
TO-251(I-PAK) Package Outline Dimensions



TO-251(I-PAK) mechanical data

UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	6.7	5.5	0.8	0.9	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	4.3	1.2	1.8 TYPICAL	1.3 TYPICAL
	min	6.3	5.1	0.3	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8		
mil	max	264	217	31	35	98	248	24	71	90 TYPICAL	22	169	47	71 TYPICAL	51 TYPICAL
	min	248	201	12	30	83	232	16	51		18	154	31		

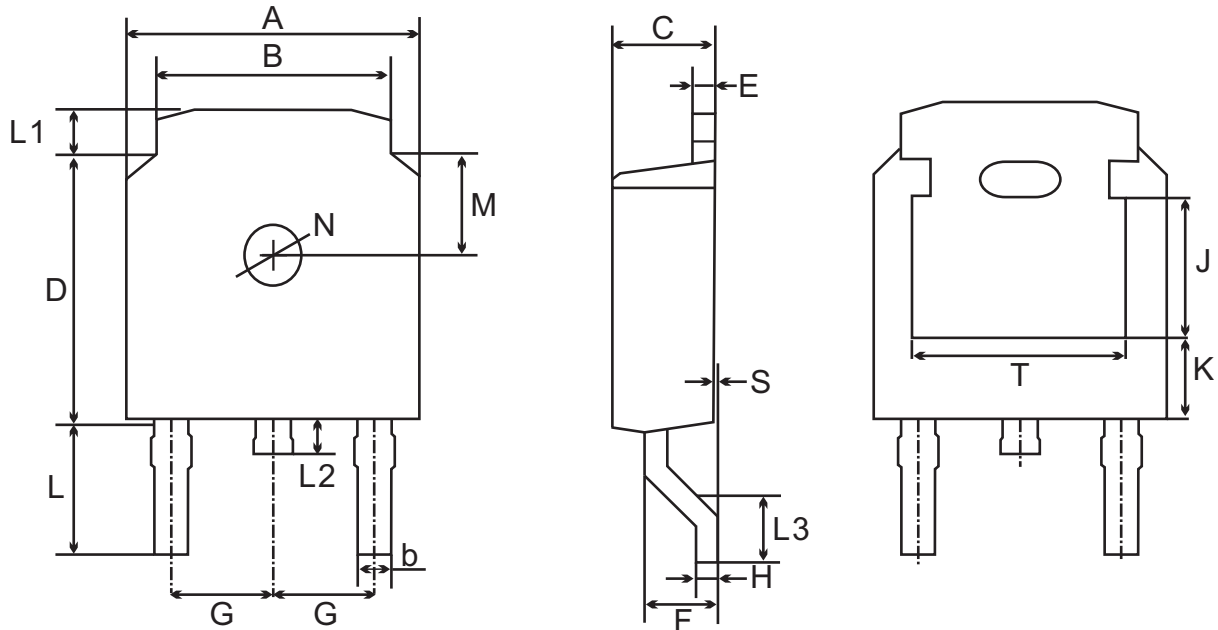
**MARKING DIAGRAM**



YWW: Date Code  
Y: Years(0~9)  
WW: Week  
G510VY: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



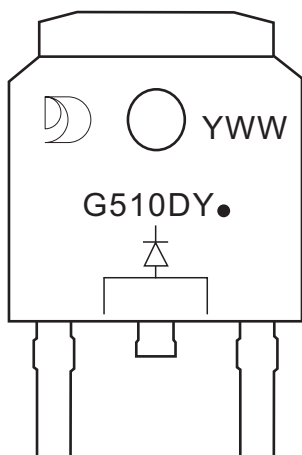
TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

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	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 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51	124	71	190
	min	248	201	12	83	232	16	51		18	106	31	24	55	0		ref.	ref.	ref.	

**MARKING DIAGRAM**



YWW: Date Code  
Y: Years(0~9)  
WW: Week  
G510DY: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



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