



**Express recovery diode**  
**Reverse Voltage-200to600v**  
**Forward current-10A**

**Features**

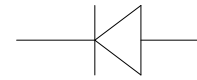
Express recovery chip  
Fast reverse recovery time  
Ideal for surface mounted applications  
Low power loss, high efficiency  
Plastic Case Material has UL Flammability



TO-252/DS

**Mechanical Data**

Package: TO-252  
Terminals: Tin Plated leads, solderable per  
Mil-STD-750 Method 2026  
Polarity: As marked  
Molding compound meets UL 94 V-0 flammability rating,  
ROHS-compliant



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

Type Number	SYMBOL	SF 1002	SF 1004	SF 1006	Umit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	V
Maximum Average Forward Rectified Current at TL = 100 °C	IO <sub>(AV)</sub>	10.0			A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated	IFSM	170.0			A
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C		340.0			A
Current squared time @1ms≤t8.3≤ms Tj=25°C, Rating of per diode	I <sup>2</sup> t	119.9			A <sup>2</sup> S
Maximum Forward Voltage at 5.0A DC	V <sub>FM</sub>	1	1.3	1.7	V
Maximum Reverse Current TA = 25°C	IR	5			uA
at Rated DC Blocking Voltage TA = 100°C		200			
Reverse Recovery Time	Trr	35			ns
Typical Thermal Resistance TO-252	R <sub>QJc</sub>	5.0			°C/W
	R <sub>QJa</sub>	50.0			
Operating Junction Temperature Range	T <sub>J</sub>	—55to+150			°C
Storage Temperature Range	T <sub>STG</sub>	—55to+150			°C



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

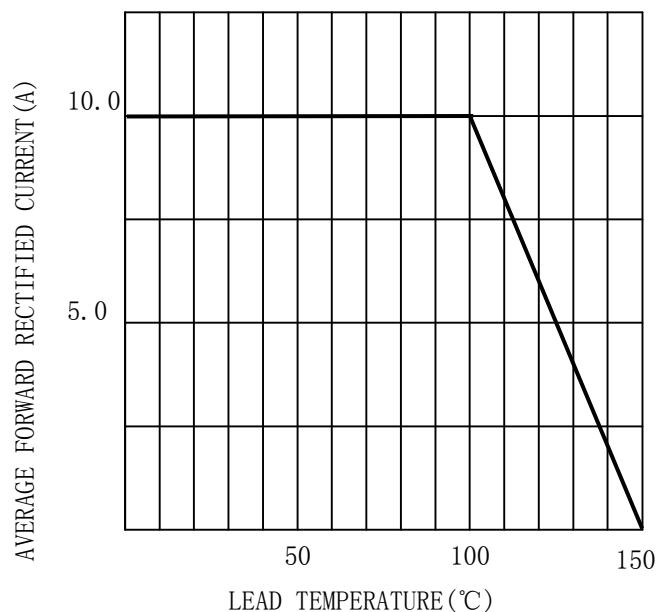


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

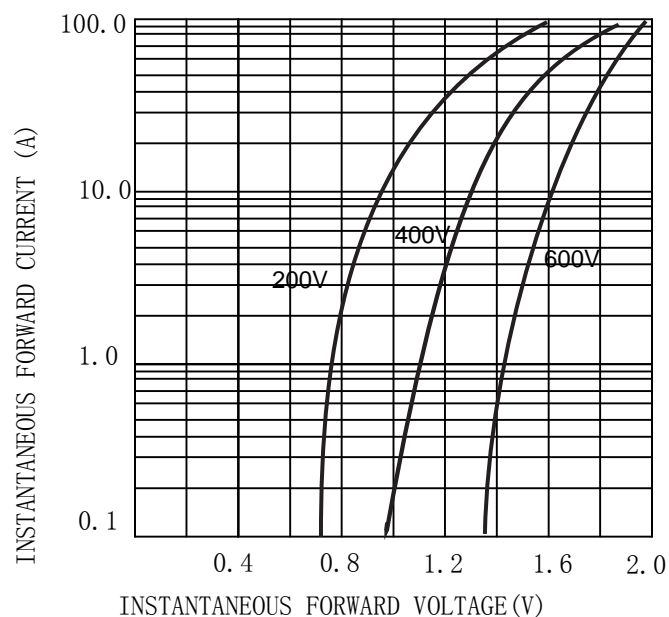


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

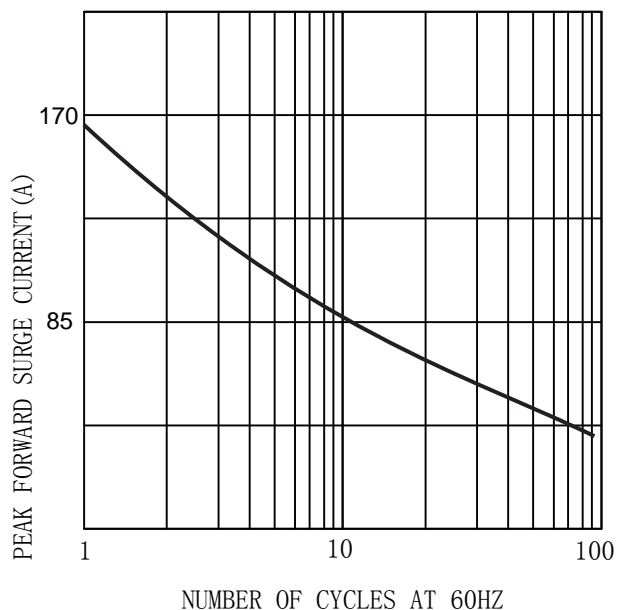
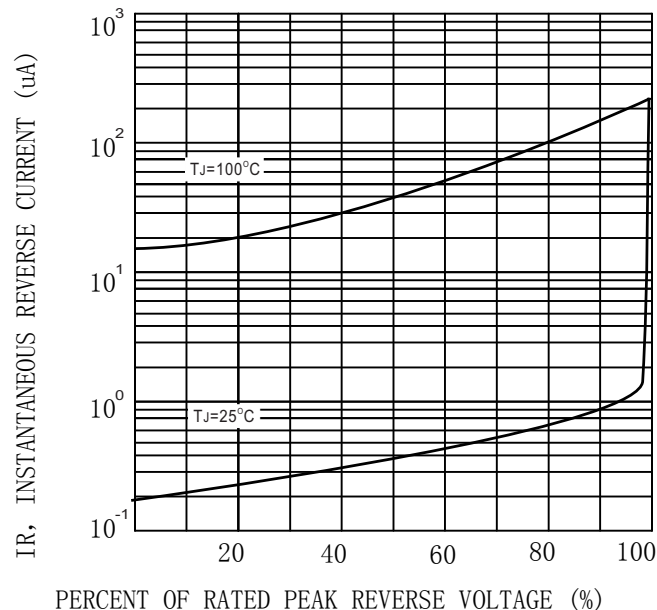
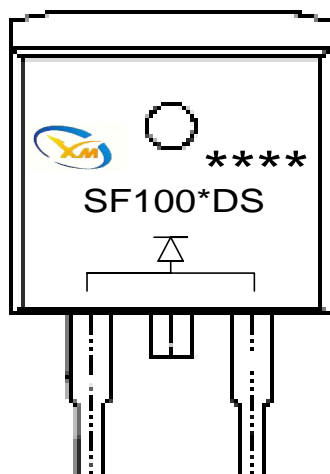



FIG. 4 TYPICAL REVERSE CHARACTERISTICS(per element)






## MARKING INFORMATION



 = Logo

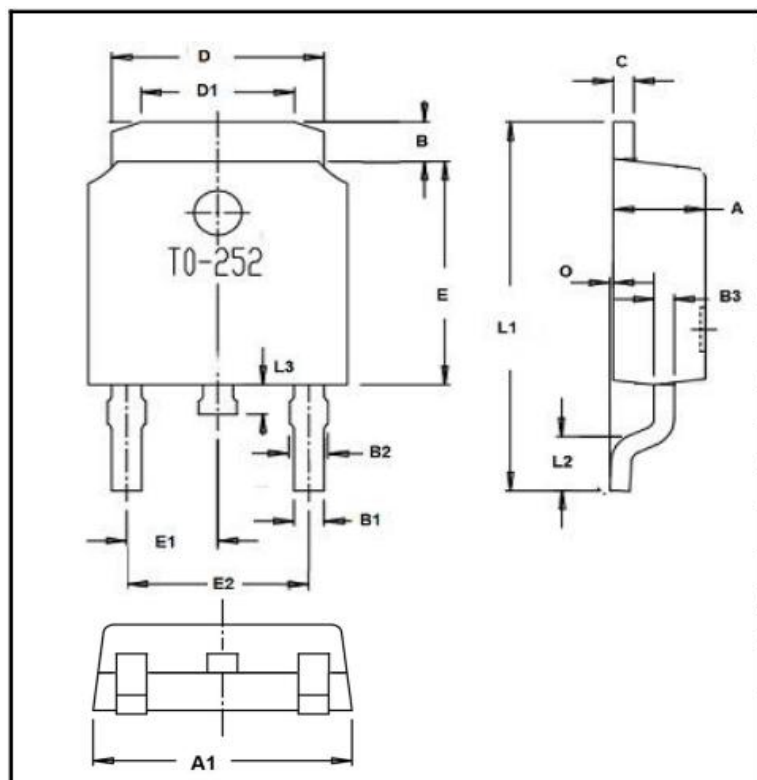
XXXX = Date Code Marking

SF100\*DS = Marking Code

 = Polar line

DEVICE TYPE	Q'TY/REEL (pcs)	BOX/CAR TOON	Q'TY/REEL (pcs)
TO-252	2500	10	25000

Dim.	Min.	Max.
A	2.1	2.5
A1	6.3	6.9
B	0.95	1.55
B1	0.6	0.8
B2	0.75	0.95
C	Typ0.5	
D	5.3	5.5
D1	3.65	4.05
E	5.8	6.4
E1	Typ2.3	
E2	Typ4.6	
O	0	0.15
L1	9	11
L2	Typ1.5	
L3	0.7	1.0
All Dimensions in millimeter		





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