

### Features

- $I_{F(AV)}$  1A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode



SOD-123FL top view

Schematic diagram

### Applications

- Rectifier

### Marking

- S1X
- X: From 2 To 20



Halogen-Free

### Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Item	Test Conditions	DSS1									Unit
			2	3	4	5	6	8	10	15	20	
$V_{RRM}$	Repetitive Peak Reverse Voltage		20	30	40	50	60	80	100	150	200	V
$V_{RMS}$	Maximum RMS voltage		14	21	28	35	42	56	70	105	140	V
$I_{F(AV)}$	Average Forward Current	60Hz Half-sine wave Resistance load	1.0									A
$I_{FSM}$	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30									A
$T_j$	Junction Temperature		-55~+125			-55~+150						$^\circ\text{C}$
$T_{stg}$	Operating and Storage Temperature Range		-55~+150									$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Item	Test Condition	DSS1									Unit
			2	3	4	5	6	8	10	15	20	
$V_F$	Peak Forward Voltage	$I_F=1.0A$	0.55		0.7		0.85		0.95		V	
$I_{RRM1}$	Peak Reverse Current	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$		0.5		0.1				mA	
$I_{RRM2}$			$T_a=100^\circ\text{C}$		10		5.0					
$R_{\theta J-A}$	Thermal Resistance(Typical)	Between junction and ambient	68									$^\circ\text{C/W}$
$R_{\theta J-L}$		Between junction and lead	10									
$C_j$	Junction Capacitance (Typical)	Measured at 1MHZ and Applied Rever Voltage of 4.0 V.D.C	40		30		26		20		pF	

### Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
DSS12	SOD-123FL	S12	3,000	45,000	180,000	7" reel
DSS13		S13				
DSS14		S14				
DSS15		S15				
DSS16		S16				
DSS18		S18				
DSS110		S110				
DSS115		S115				
DSS120		S120				

Typical Characteristics

Fig.1 Forward Current Derating Curve

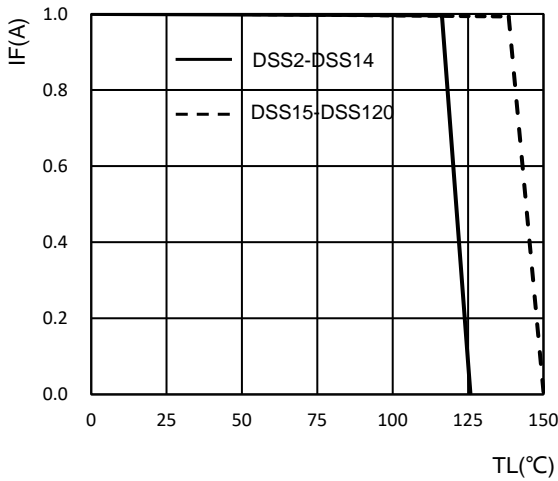
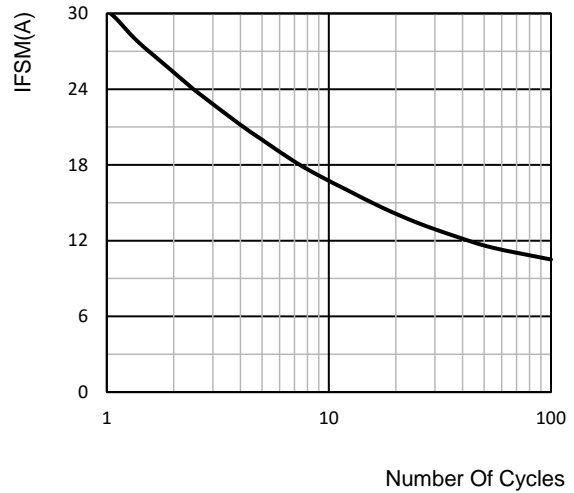
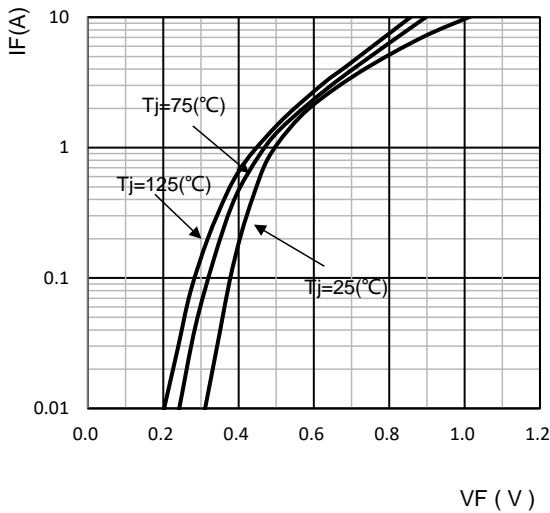


Fig.2 Maximum Non-Repetitive Forward Surge Current



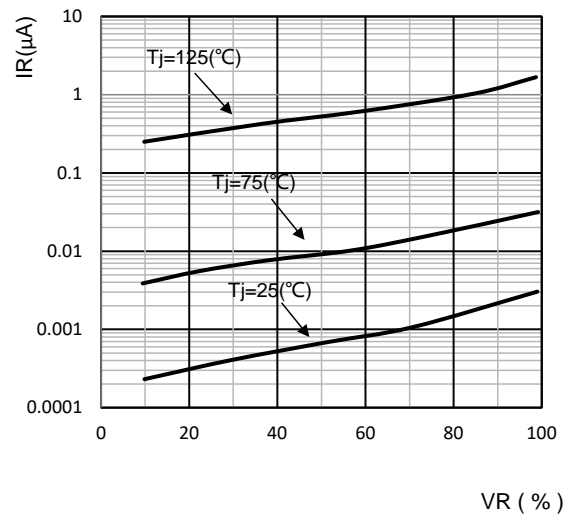
DSS12-DSS14

Fig.3 Typical Forward Characteristics



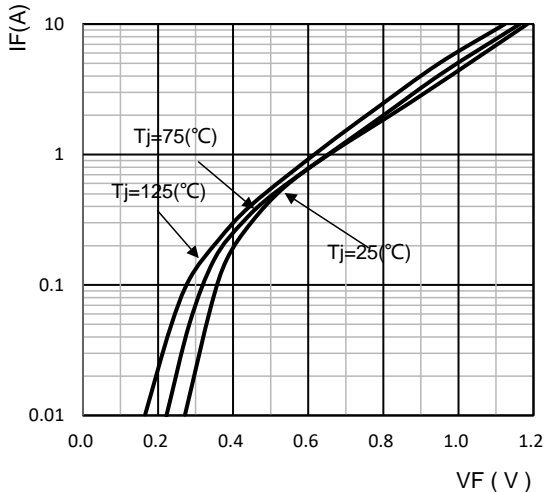
DSS12-DSS14

Fig.4 Typical Reverse Characteristics



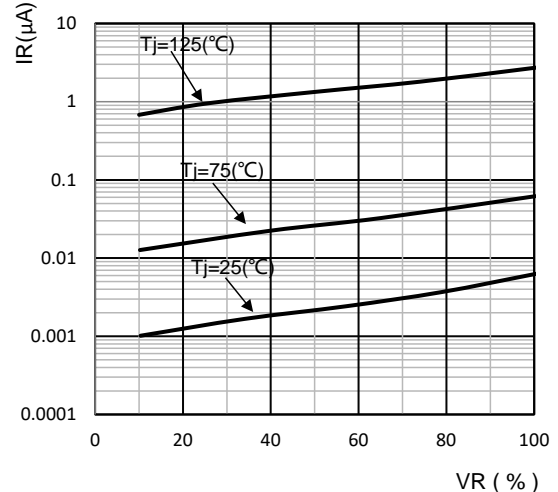
DSS15-DSS16

Fig.5 Typical Forward Characteristics



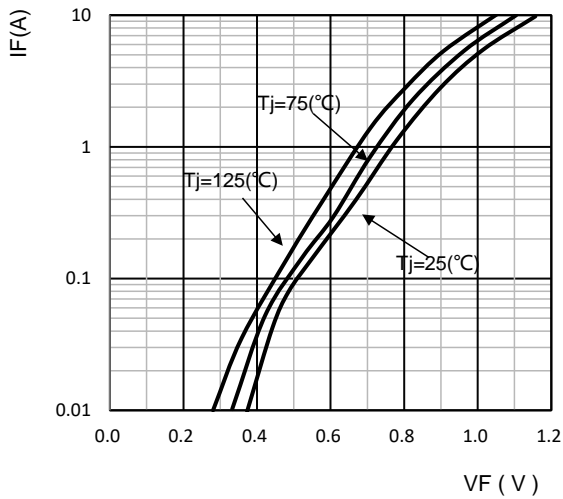
DSS15-DSS16

Fig.6 Typical Reverse Characteristics



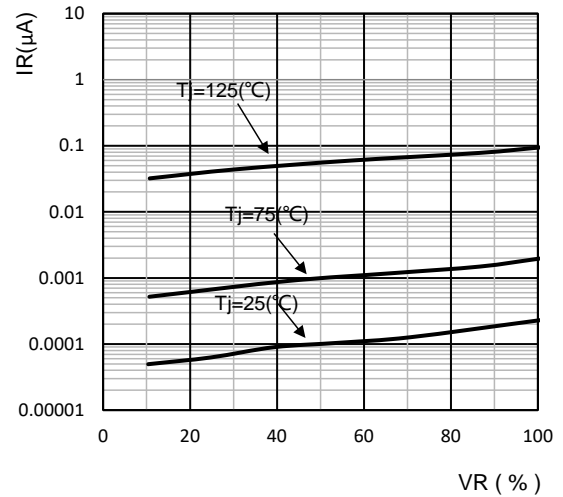
**DSS18-DSS110**

**Fig.7 Typical Forward Characteristics**



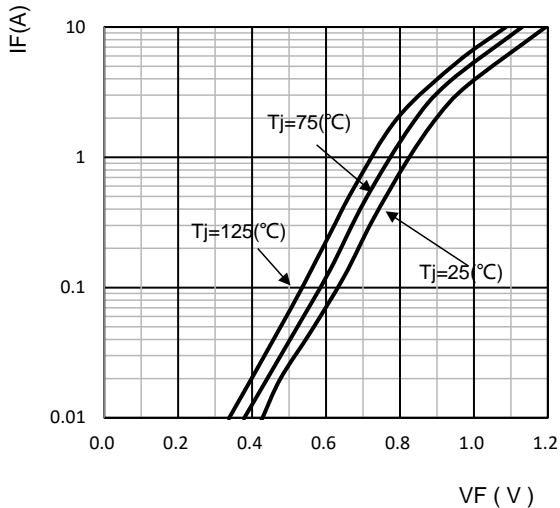
**DSS18-DSS110**

**Fig.8 Typical Reverse Characteristics**



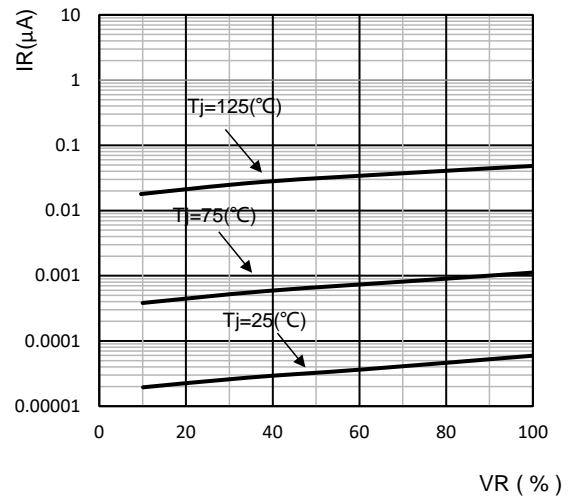
**DSS115**

**Fig.9 Typical Forward Characteristics**



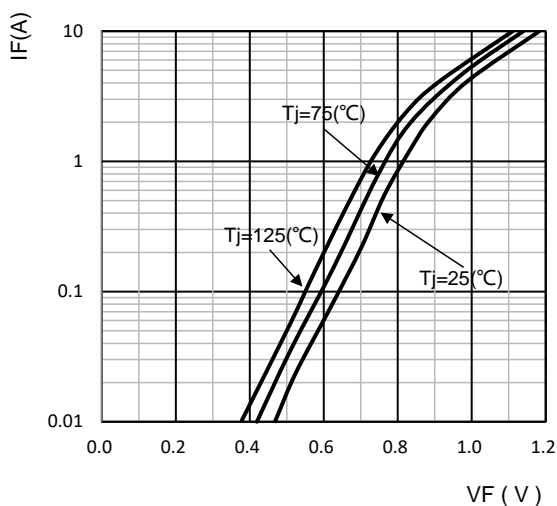
**DSS115**

**Fig.10 Typical Reverse Characteristics**



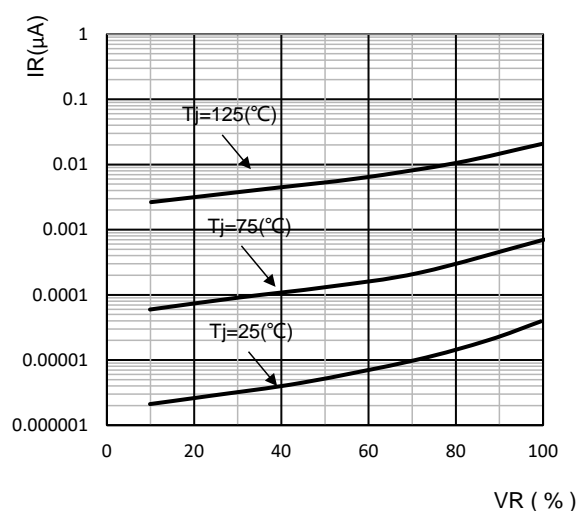
**DSS120**

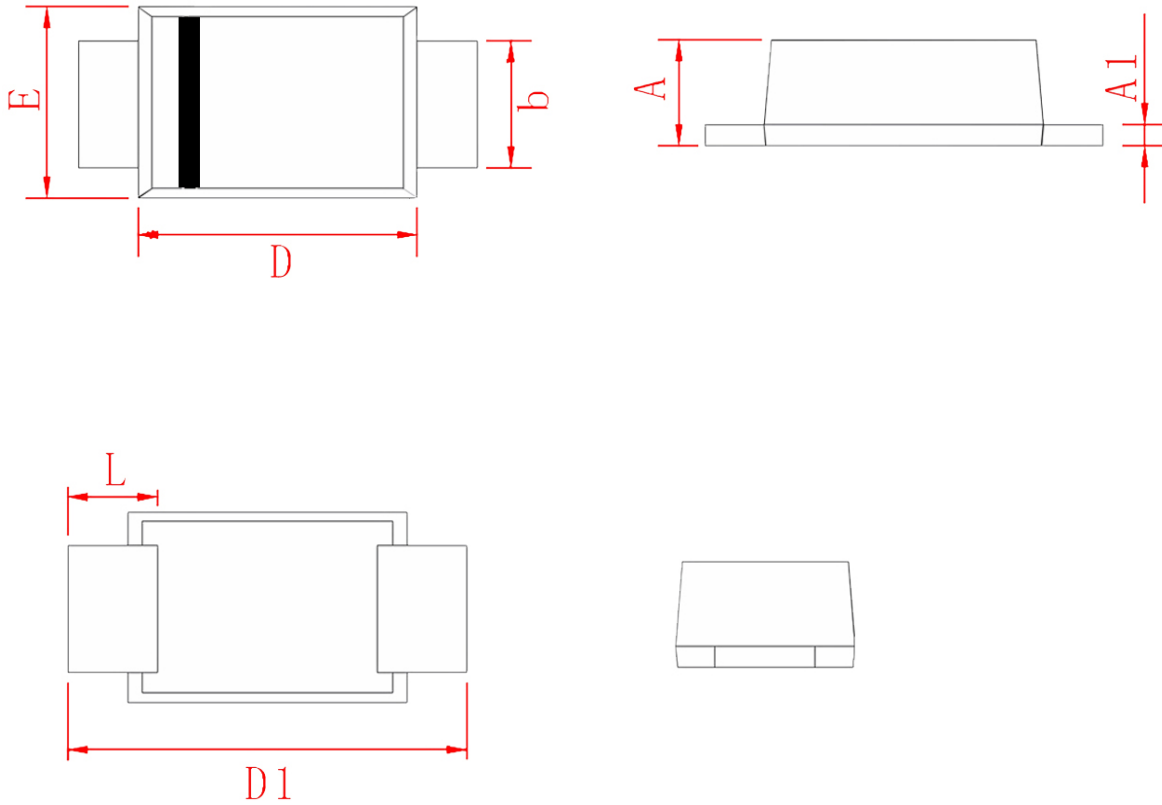
**Fig.11 Typical Forward Characteristics**



**DSS120**

**Fig.12 Typical Reverse Characteristics**



**SOD-123FL Package information**


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.200	1.400	0.047	0.055
A1	0.120	0.250	0.005	0.010
b	0.850	1.150	0.033	0.045
D	2.650	2.950	0.104	0.116
D1	3.550	3.850	0.140	0.152
E	1.700	1.900	0.067	0.075
L	0.500	0.900	0.020	0.035