BORN SEMICONDUCTOR

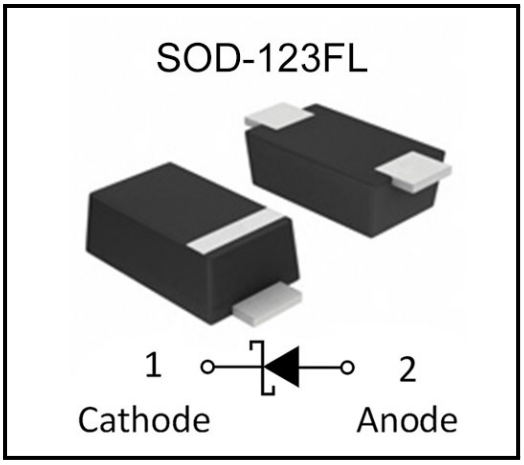
DSS12-DSS120

Schottky Barrier Diode

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

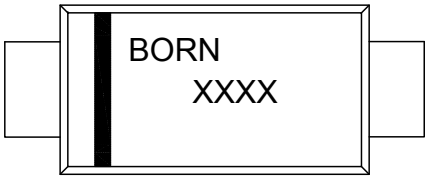
Package



Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-123FL Plastic Package

Marking



Ordering information

Part Number	DSS12	DSS13	DSS14	DSS15	DSS16	DSS17	DSS18	DSS19	DSS110	DSS115	DSS120
Marking	S12	K13	SL	K15	S16	K17	K18	K19	K110	K115	K120
Base qty	3K	3K	3K	3K	3K	3K	3K	3K	3K	3K	3K

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Specifications are subject to change without notice.
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Maximum Ratings and Electrical Characteristics@T_A=25°C unless otherwise noted

Symbol	Parameter	DSS 12	DSS 13	DSS 14	DSS 15	DSS 16	DSS 17	DSS 18	DSS 19	DSS 110	DSS 115	DSS 120	Units
V_{RRM}	Max. Repetitive Peak Reverse Voltage	20	30	40	50	60	70	80	90	100	150	200	V
V_{RMS}	Maximum RMS Voltage	14	21	28	35	42	49	56	63	70	105	140	V
V_{DC}	Maximum DC Blocking Voltage	20	30	40	50	60	70	80	90	100	150	200	V
$I_{F(AV)}$	Maximum average forward Rectified Current	1.0											A
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	30.0											A
V_F	Maximum Instantaneous Forward Voltage at 1.0A	0.55			0.70			0.85			0.95		V
I_R	Max. DC reverse current at T_A=25°C	0.5						0.1					mA
	rated DC blocking voltage T_A=100°C	10.0						5.0					
C_J	Typ. Junction Capacitance	110			80								pF
T_J	Operating Junction Temperature	-55 to +125						-55 to +150					°C
T_{STG}	Storage Temperature	-55 to +150											°C
$R_{\theta JA}$	Thermal Resistance(1)	70											°C/W
$R_{\theta JL}$		20											

Note:(1)Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

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Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Current Derating Curve

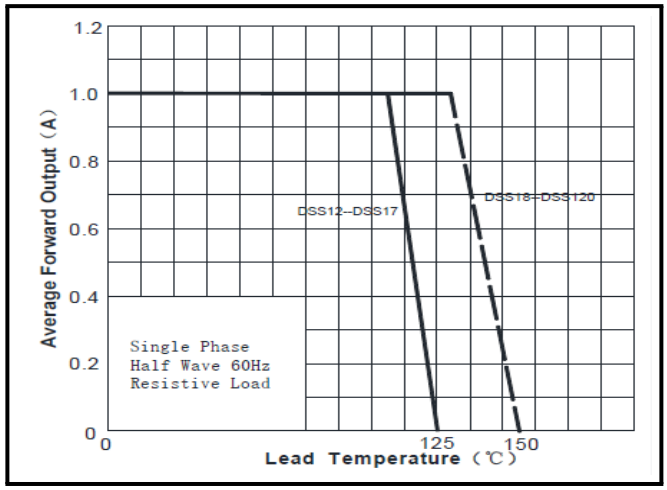


Figure 2: Surge Forward Current Capability

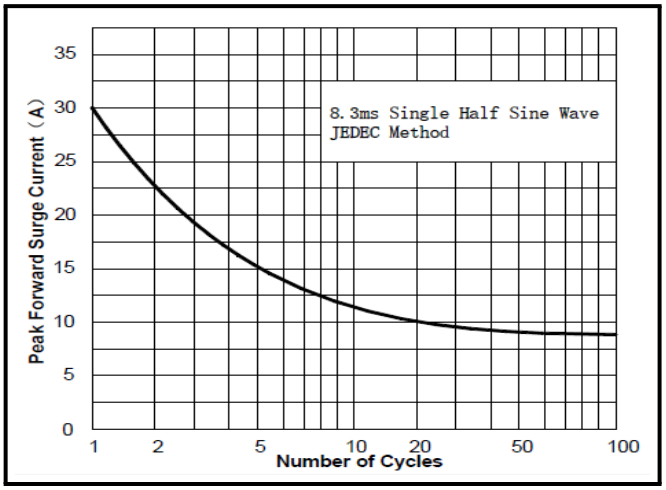


Figure 3: Forward Voltage

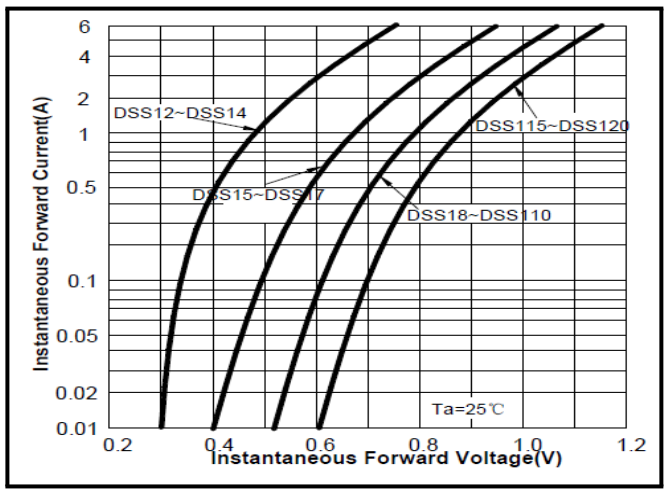
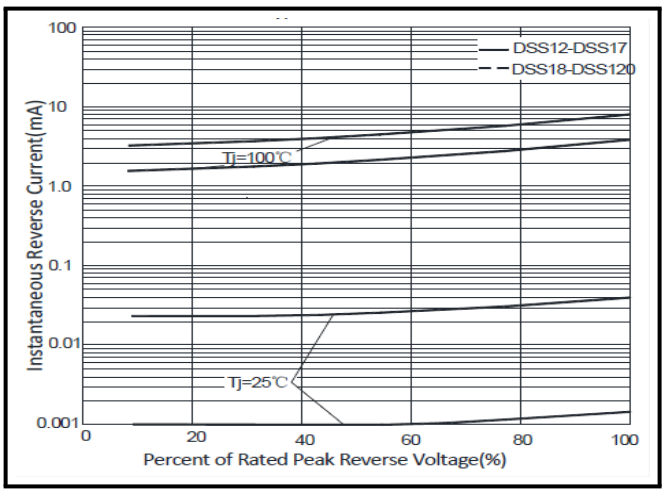


Figure 4: Typical Reverse Characteristics



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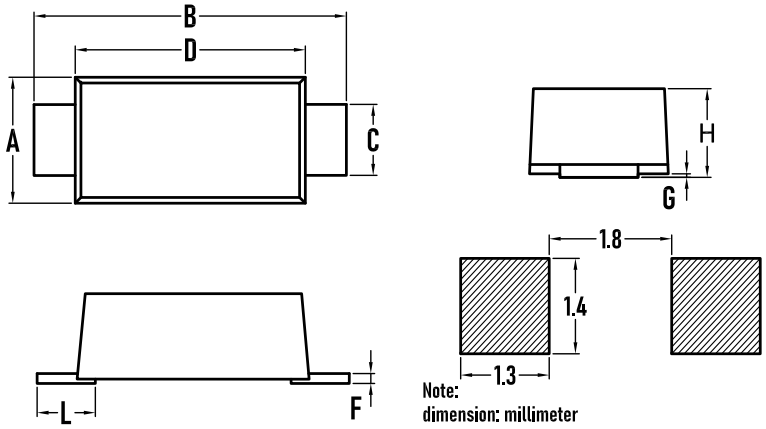
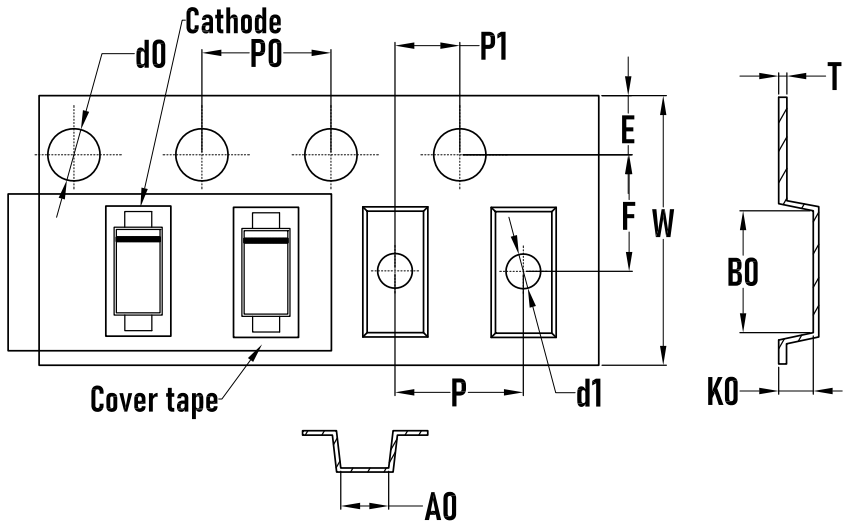
Package Mechanical Data - SOD-123FL



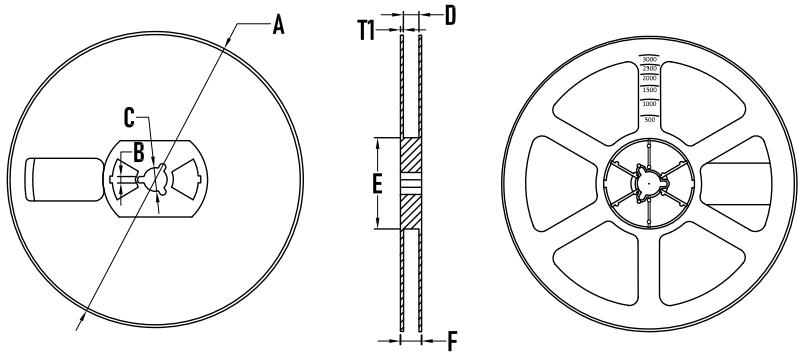
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	1.50	1.75	2.00
B	3.40	3.65	3.90
C	0.70	0.95	1.20
D	2.50	2.70	2.90
F	0.05	0.15	0.26
G	0.00	–	0.10
H	0.95	1.15	1.35
L	0.35	0.63	0.90

Packaging Tape - SOD-123FL



SYMBOL	MILLIMETER
A0	2.10±0.1
B0	4.0 ±0.1
d0	1.5±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.25±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.1
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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