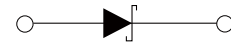


FEATURES

- For Surface Mounted Applications
- Built-in Strain Relief, ideal For Automated Placement
- Low Reverse Leakage
- High Forward Surge Current Capability
- Meet AEC-Q101 Requirements



SOD-123FL



Schematic Symbol

MECHANICAL DATA

- Case : Molded Plastic Body
- Polarity : Polarity Symbol Marking on Body
- Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	SS 22DQ	SS 23DQ	SS 24DQ	SS 25DQ	SS 26DQ	SS 27DQ	SS 28DQ	SS 29DQ	SS 210DQ	SS 215DQ	SS 220DQ	Unit
Marking		D22	D23	D24	D25	D26	D27	D28	D29	D210	D215	D220	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	70	80	90	100	150	200	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	49	56	63	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	70	80	90	100	150	200	V
Maximum Average Forward Rectified Current at T _L =100°C	I _{F(AV)}	2.0											A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	40											A
Maximum Instantaneous Forward Voltage at 2.0A	V _F	0.55			0.70			0.85			0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C T _A =100°C	I _R	0.50				0.10					mA	
			10				5					mA	
Typical Thermal Resistance	R _{θJ-A}	70 ¹⁾											°C/W
	R _{θJ-L}	20 ¹⁾											°C/W
Operating Junction Temperature Range	T _J	-55 to +150					-55 to +175						°C
Storage Temperature Range	T _{STG}	-55 to +150											°C

Note:

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

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

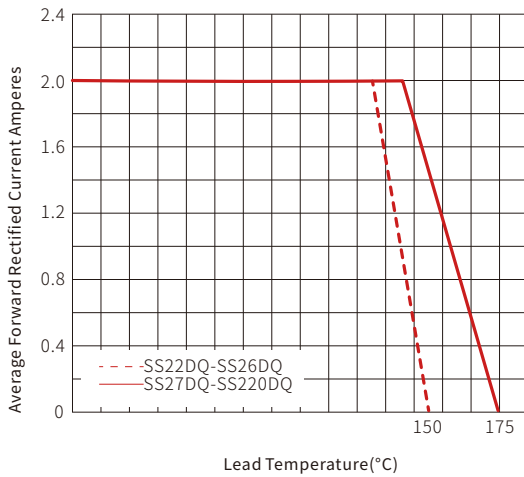


Fig. 2-Maximum Non-repetitive Peak Forward Surge Current Perleg

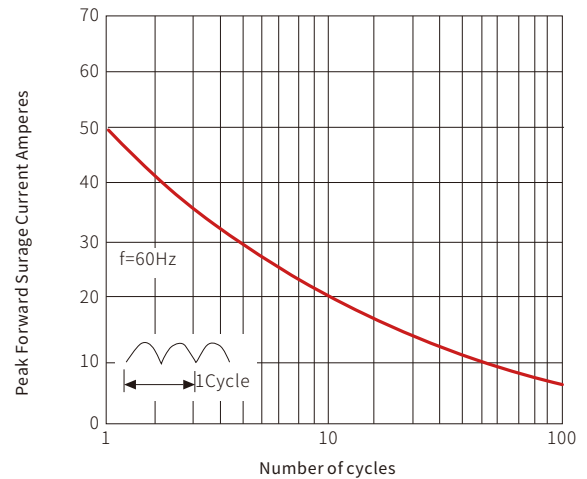


Fig. 3-Typical Forward Voltage Characteristics

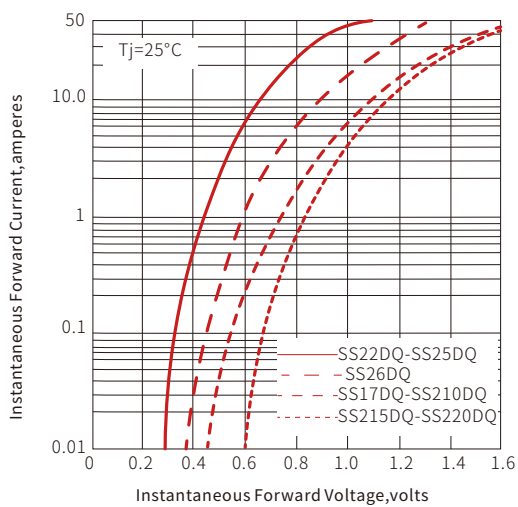
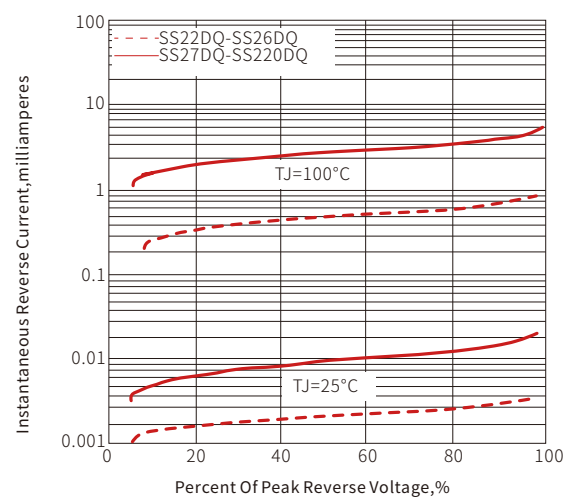
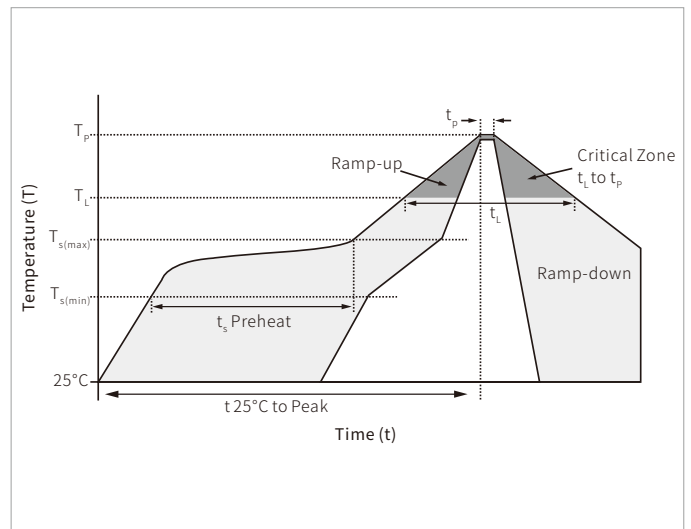


Fig. 4-Typical Reverse Leakage Characteristics

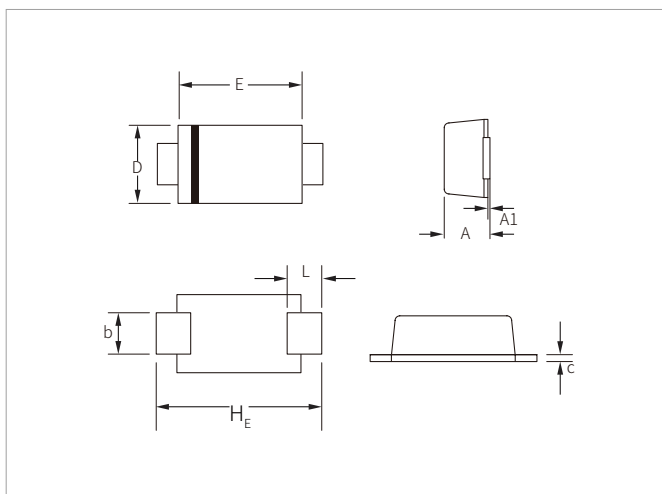


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_l)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

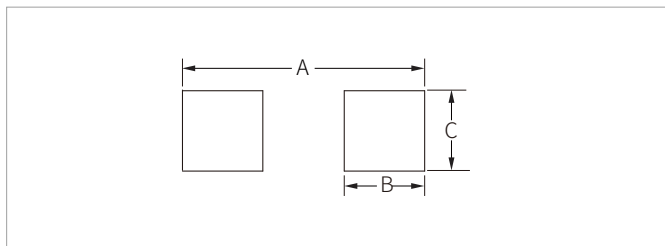


SOD-123FL PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.45	0.037	0.057
A1	0.00	0.10	0.000	0.004
b	0.70	1.20	0.028	0.047
c	0.05	0.30	0.002	0.012
D	1.50	2.00	0.059	0.079
E	2.50	3.10	0.098	0.122
L	0.35	0.90	0.014	0.035
H_E	3.40	3.90	0.134	0.154

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	4.20	0.165
B	1.50	0.059
C	1.20	0.047

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SS22DQ-SS220DQ	SOD-123FL	3000PCS	7"

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