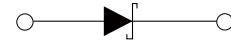


FEATURES

- | Low Power Package
- | Ideal For Automated Placement
- | Guard Ring For Over-voltage Protection
- | High Forward Surge Capability
- | Low Power Losses High Capability
- | Meet AEC-Q101 Requirements



SOD-123FL



Schematic Symbol

TYPICAL APPLICATIONS

- | For Use In Low Voltage High Frequency Inverters Freewheeling DC/DC Converters and Polarity Protection Applications

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	SS32 DQ	SS33 DQ	SS34 DQ	SS35 DQ	SS36 DQ	SS38 DQ	SS310 DQ	SS315 DQ	SS320 DQ	Unit
Marking		D32	D33	D34	D35	D36	D38	D310	D315	D320	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Average Rectified Output Current @60Hz Sine Wave, Resistance Load, Ta (FIG.1)	I _O	3.0									A
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave,1 cycle, Tj=25°C	I _{FSM}	65									A
Maximum Instantaneous Forward Voltage at 3.0A	V _F	0.55			0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage Per Diode @ V _{RM} =V _{RRM}	T _a =25°C	0.5					0.1				mA
	T _a =100°C	10					5				mA
Typical Junction Capacitance measured at 1MHz and Applied on 4.0 VD.C	C _J	165									pF
Operating Junction Temperature Range	T _J	-55 to +150					-55 to +175				°C
Storage Temperature Range	T _{STG}	-55 to +150									°C
Thermal Resistance	R _{θJ-A}	70 ¹⁾									°C/W
	R _{θJ-L}	25 ¹⁾									°C/W

Note (1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 3mm x 3mm copper pad areas

CHARACTERISTIC CURVES

Fig. 1- I_o -TL Curve

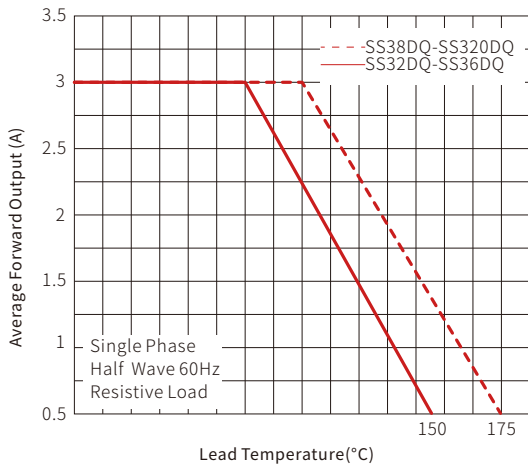


Fig. 2-Surge Forward Current Capability

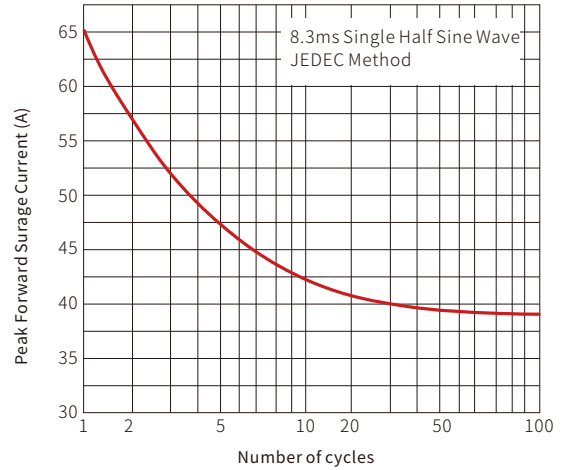


Fig. 3-Forward Voltage

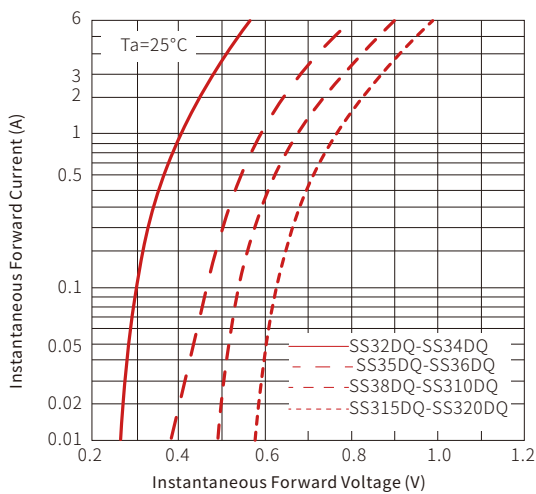
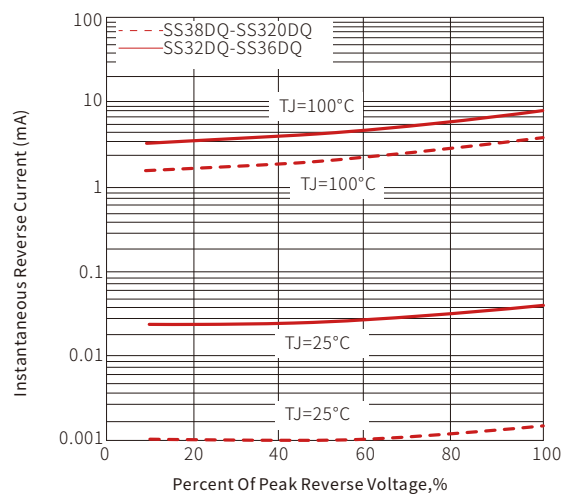
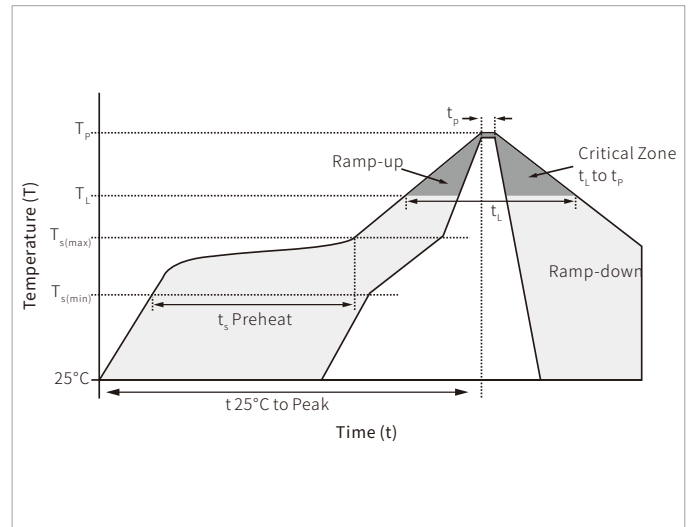


Fig. 4-Typical Reverse Characteristics

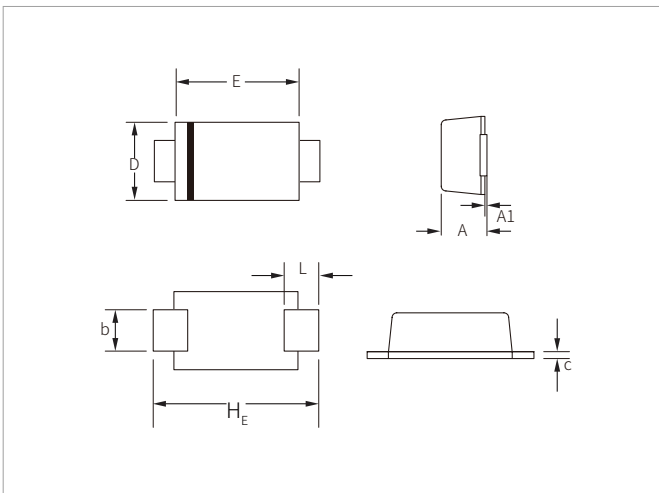


SOLDERING PARAMETERS

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

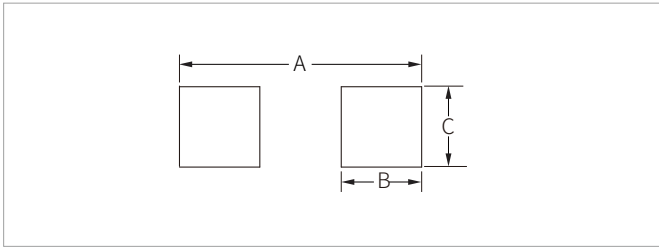


SOD-123FL PACKAGE INFORMATION



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
SS32DQ-SS320DQ	SOD-123FL	3000PCS	7"

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