Technical Data
Data Sheet N1873, Rev. D

DSS12U THRU DSS120U

SINGLE PHASE 1.0AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SOD-123FL

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High temperature soldering guaranteed: 260/10° C seconds,0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension
- "-A" suffix is for Automotive qualified
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band dentes cathode end
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	DSS 12U	DSS 13U	DSS 14U	DSS 15U	DSS 16U	DSS 18U	DSS 110U	DSS 115U	DSS 120U	Units
	Marking Code	D12U	D13U	D14U	D15U	D16U	D18U	D110U	D115U	D120U	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}	20	30	40	50	60	80	100	150	200	V
DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
RMS Reverse Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Average Rectified Output Current at T_L=90℃	$I_{F(AV)}$	1.0									A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on Rated load(JEDEC Method)	I_{FSM}	40									A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	6.640									A^2s
Forward Voltage per element @I_F=1.0A	V_F	0.50			0.67		0.80		0.90		V
Peak Reverse Current T_A=25 ℃	I_R	0.1					0.05				mA
at rated DC blocking voltage T_A=100 ℃		10					5				
Typical Junction Capacitance (Note 1)	C_J	50					35				pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	75									°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150									°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.1"*0.15" copper pad.

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

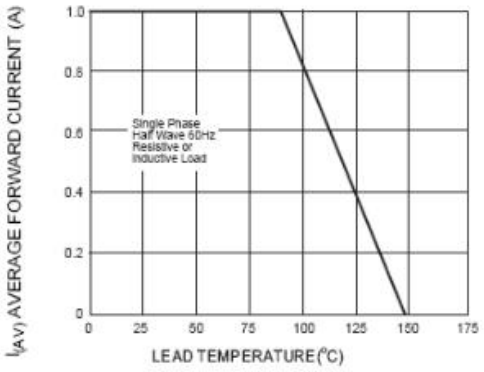


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

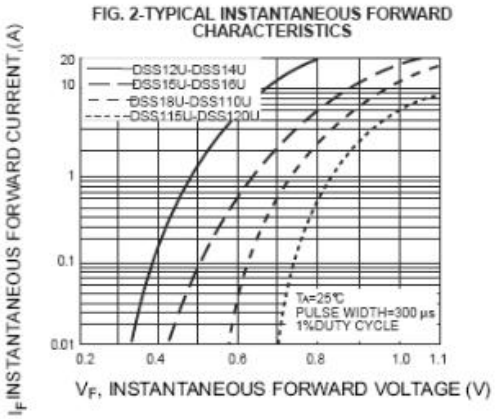


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

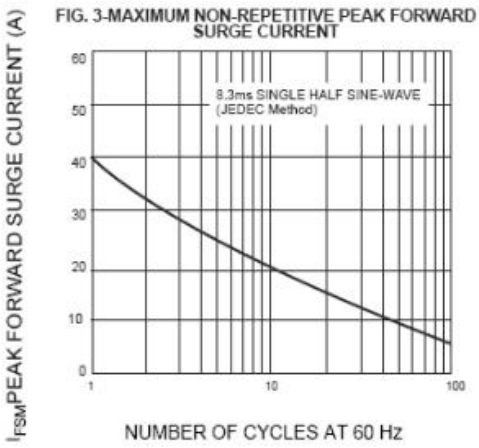


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

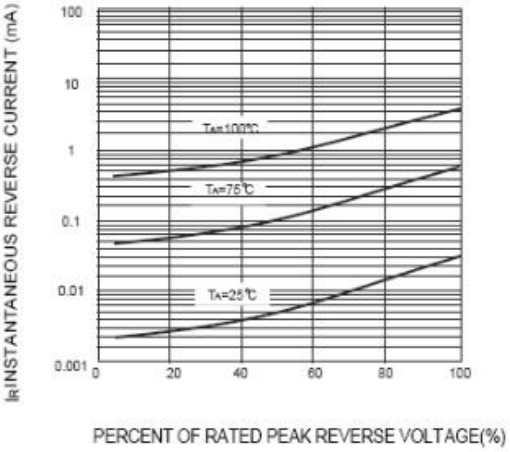
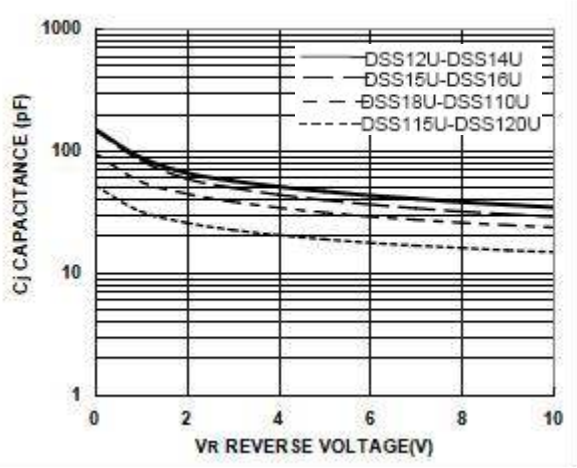


FIG. 5 - TYPICAL JUNCTION CAPACTANCE



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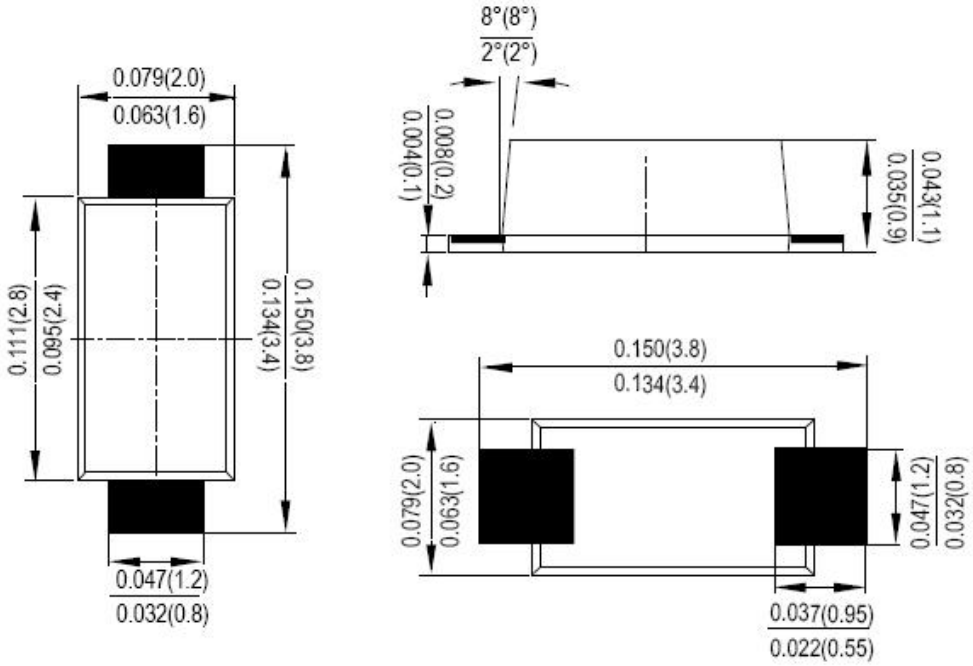
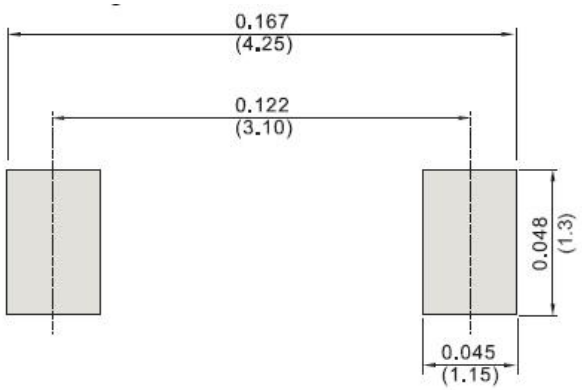
Mechanical Dimensions SOD-123FL(Inches/Millimeters)



Recommended Soldering Pattern (mm)



Ordering Information

Device	Package	Shipping
DSS12U THRU DSS120U	SOD-123FL (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

D12U = Marking Code(See Table)

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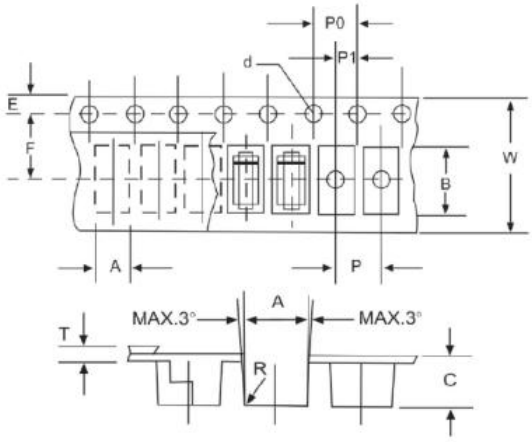
Carrier Tape Specification SOD-123FL



SYMBOL	Millimeters	
	Min.	Max.
A	1.95	2.15
B	3.85	4.05
C	1.35	1.55
d	1.50	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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