

## DSS32U THRU DSS320U

### SINGLE PHASE 3.0AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER



#### 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
- This is a Halogen 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 dented cathode end
- Mounting Position: Any

#### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	DSS 32U	DSS 33U	DSS 34U	DSS 35U	DSS 36U	DSS 38U	DSS 310U	DSS 315U	DSS 320U	Units	
	Marking Code	D32U	D33U	D34U	D35U	D36U	D38U	D310U	D315U	D320U		
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V	
DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	V	
RMS Reverse Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	V	
Average Rectified Output Current at T <sub>L</sub> =90°C	I <sub>F(AV)</sub>	3									A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on Rated load(JEDEC Method)	I <sub>FSM</sub>	90									A	
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	33.615									A <sup>2</sup> s	
Forward Voltage per element @I <sub>F</sub> =3.0A	V <sub>F</sub>	0.50			0.67		0.82		0.90		V	
	Typ.	0.48			0.59		0.78		0.84			
Peak Reverse Current T <sub>A</sub> =25 °C at rated DC blocking voltage T <sub>A</sub> =100 °C	I <sub>R</sub>	0.1					0.05					mA
		10					5					
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	140					80					pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	115									°C/W	
Junction and Storage Temperature Range	T <sub>J</sub>	-55 to +150									°C	
Junction and Storage Temperature Range	T <sub>STG</sub>	-55 to +150									°C	

Note: 1. Measured at 1MHz and applied reverse voltage of 4V D.C

**Ratings and Characteristics Curves**

Fig. 1 Typical Forward Current Derating Curve

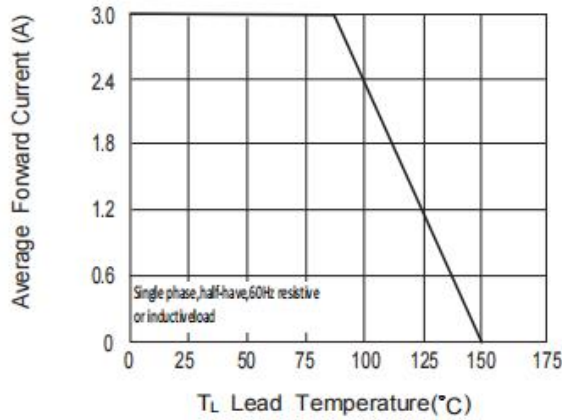


Fig. 2 Typical Instantaneous Forward Characteristics

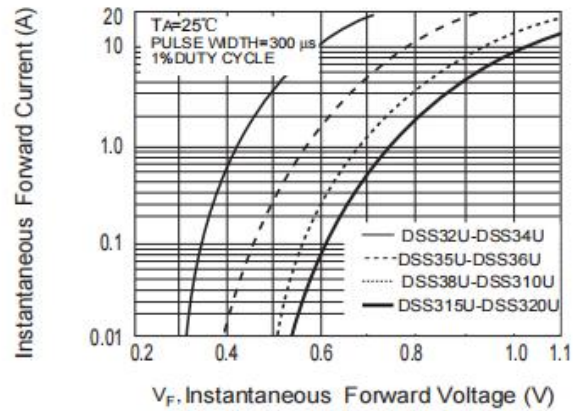


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

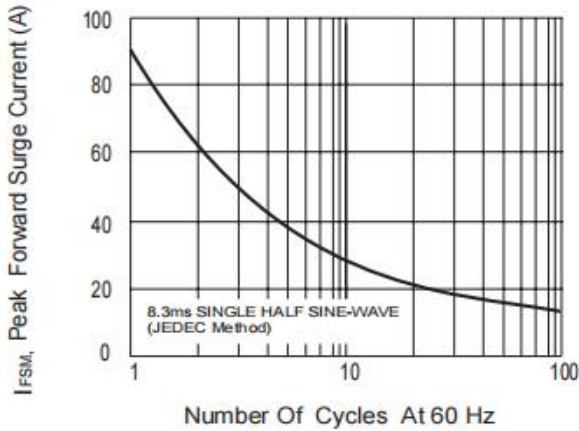


Fig. 4 Typical Reverse Characteristics

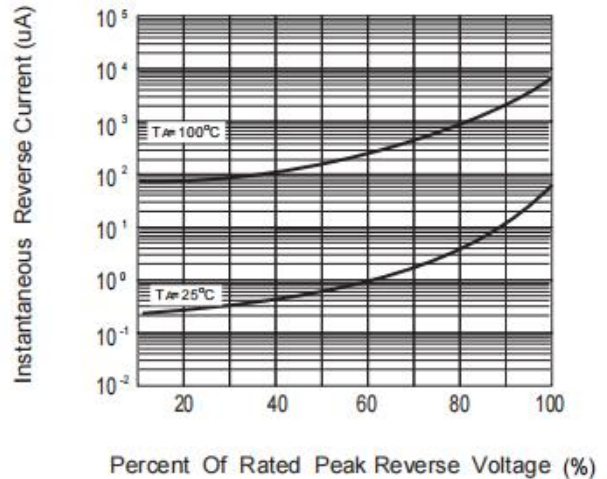
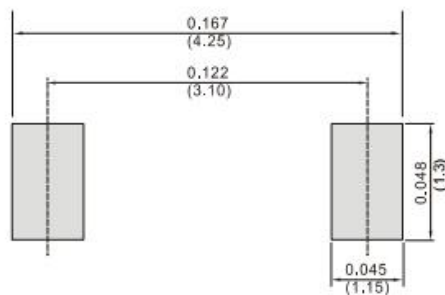
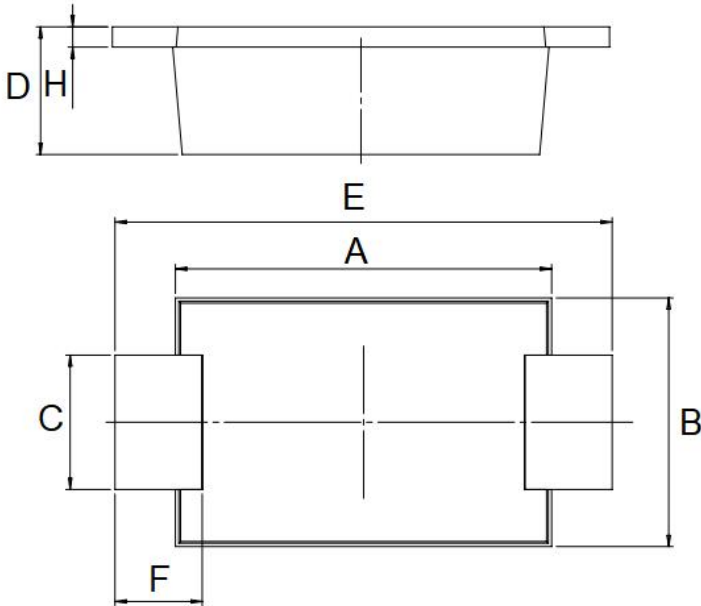


Fig. 5 Typical Capacitance



**Mechanical Dimensions SOD-123FL(Millimeters)**



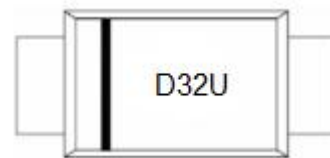
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.094	0.110
B	1.60	2.00	0.063	0.079
C	0.80	1.20	0.031	0.047
D	0.90	1.10	0.035	0.043
E	3.40	3.80	0.134	0.150
F	0.55	0.95	0.022	0.037
H	0.10	0.20	0.004	0.008

**Ordering Information**

Device	Package	Shipping
DSS32U THRU DSS320U	SOD-123FL	3000pcs / reel

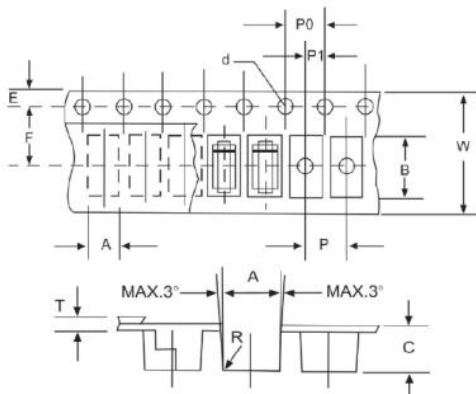
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



D32U = Marking Code

**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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