

# DSS12 THRU DSS125

SINGLE PHASE 1.0AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

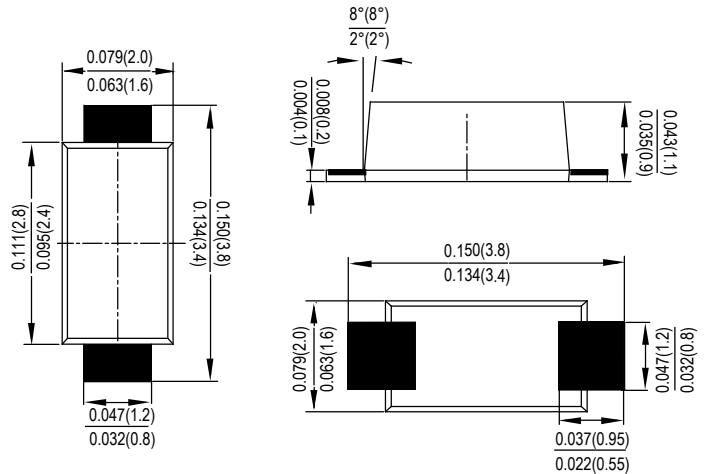
## Features

- 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 °C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

## Mechanical Data

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

### SOD-123FL



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	DSS12	DSS13	DSS14	DSS15	DSS16	DSS18	DSS110	DSS115	DSS120	DSS125	UNITS	
	Code	D12	D13	D14	D15	D16	D18	D110	D115	D120	D125		
Peak Repetitive Reverse Voltage	$V_{RRM}$											V	
Working Peak Reverse Voltage	$V_{RWM}$	20	30	40	50	60	80	100	150	200	250		
DC Blocking Voltage	$V_{DC}$												
RMS Reverse Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	175	V	
Average Rectified Output Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	1.0										A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30										A	
$I^2t$ Rating for Fusing ( $t < 8.3ms$ )	$I^2t$	3.735										A <sup>2</sup> s	
Forward Voltage per element @ $I_F = 1.0A$	$V_{FM}$	0.55		0.7		0.85		0.92		0.95		V	
Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	0.1					0.05					mA	
		10					5						
Typical junction capacitance (NOTE 1)	$C_J$	110				80							pF
Operating junction temperature range	$T_J$	-55to+150										°C	
Operating and Storage Temperature Range	$T_{STG}$	-55to+150										°C	

Note:1. Measured at 1MHZ and applied reverse voltage of 4.0V D.C.

FIG. 1- FORWARD CURRENT DERATING CURVE

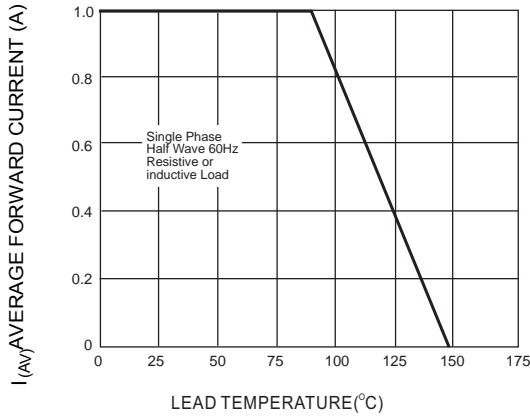


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

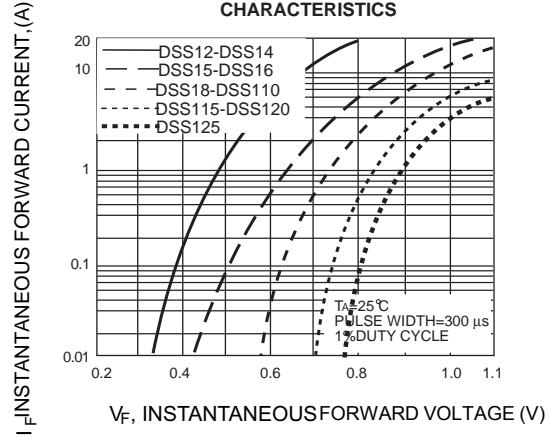


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

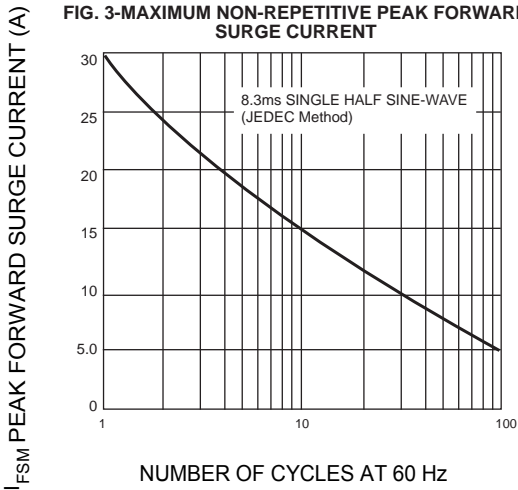


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

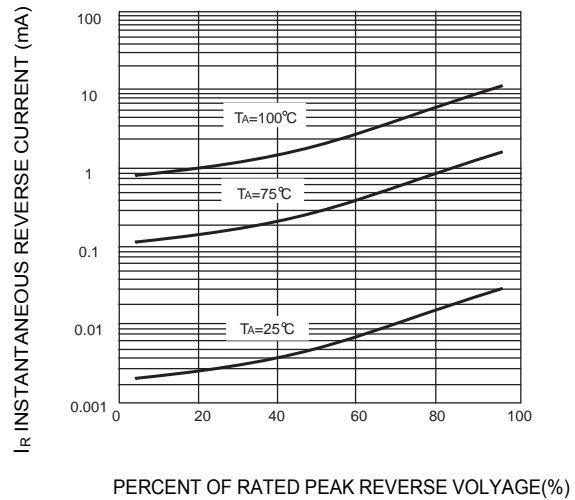
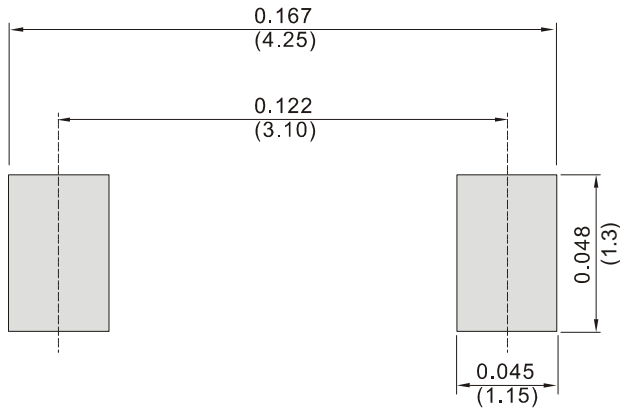


Fig.5 TYPICAL CAPACITANCE



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