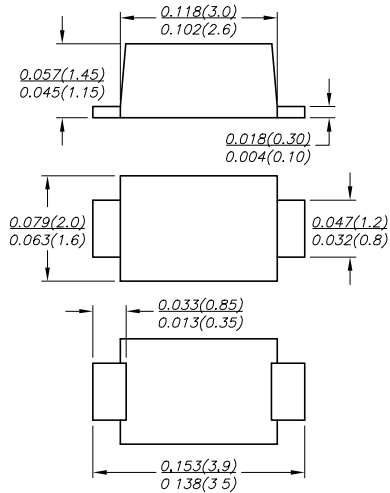


# DSS12 THRU DSS110

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 1.0 Ampere

### SOD-123FL



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ 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 body

**Terminals:** Solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0007 ounce, 0.02 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	DSS12 D12	DSS13 D13	DSS14 D14	DSS15 D15	DSS16 D16	DSS17 D17	DSS18 D18	DSS19 D19	DSS110 D110	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	V	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	V	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	V	
Maximum average forward rectified current	$I_{(AV)}$	1.0									A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25.0									A	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55			0.70			0.85			V	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5			10.0			0.1			mA	
Typical junction capacitance (NOTE 1)	$C_J$	110			80						pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	95									°C/W	
Operating junction temperature range	$T_J$	-55 to +125					-55 to +150					°C
Storage temperature range	$T_{STG}$	-55 to +150									°C	

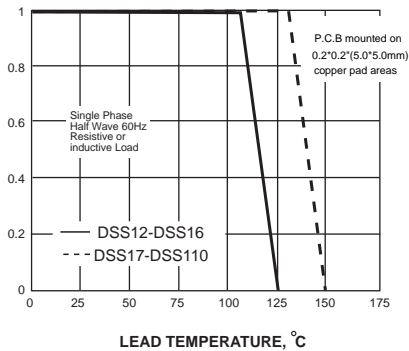
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. PCB mounted on 0.2"×0.2" (5.0×5.0mm) copper pad area.

# RATINGS AND CHARACTERISTIC CURVES DSS12 THRU DSS110

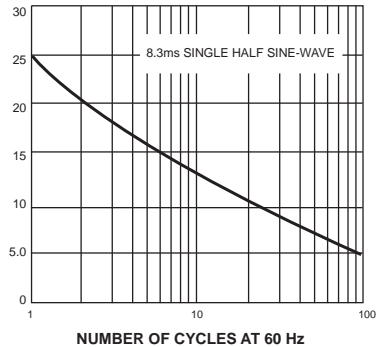
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



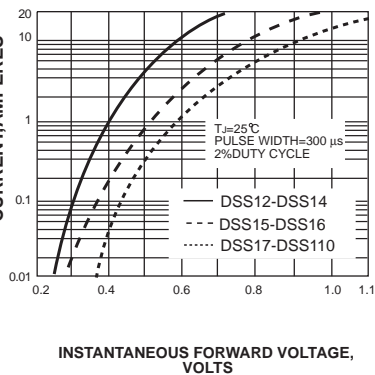
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



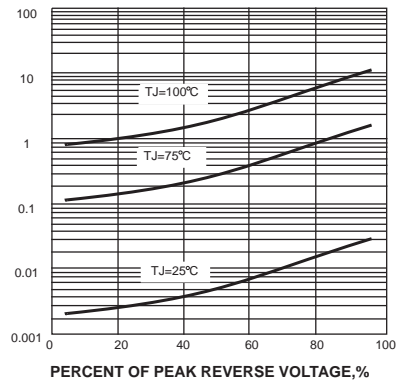
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

