



# DSS12 THRU DSS120

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

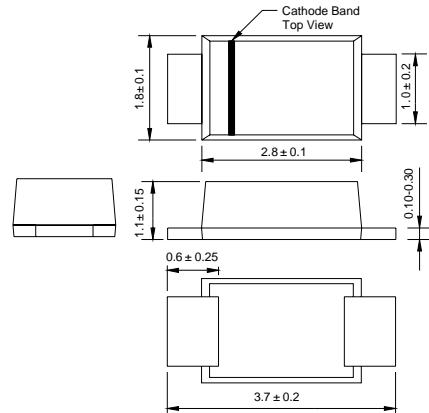
### FEATURES

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:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC 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

### SOD-123FL



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating<sup>§</sup> 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	DSS115 D115	DSS120 D120	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	150	200	VOLTS	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	105	140	VOLTS	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	150	200	VOLTS	
Maximum average forward rectified current	$I_{(AV)}$	1.0											Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0											Amps	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55			0.70			0.85			0.95		Volts	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=100^{\circ}C$	$I_R$	0.5					0.2					0.1		mA
		10.0					5.0					2.0		
Typical junction capacitance (NOTE 1)	$C_J$	110					80							pF
Operating junction temperature range	$T_J$	-55 to +125						-55 to +150						$^{\circ}C$
Storage temperature range	$T_{STG}$	-55 to +150											$^{\circ}C$	

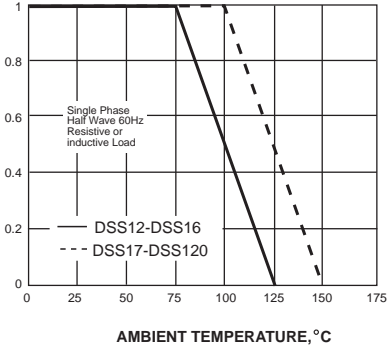
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



## RATINGS AND CHARACTERISTIC CURVES DSS12 THRU DSS120

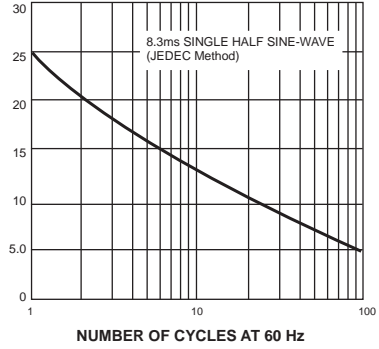
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



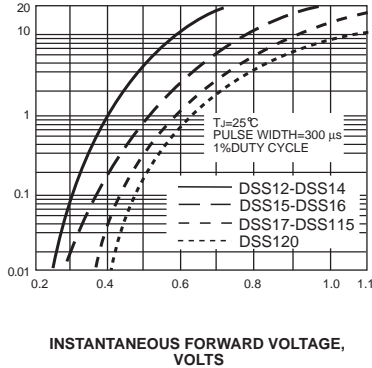
PEAK FORWARD SURGE CURRENT, AMPERES

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



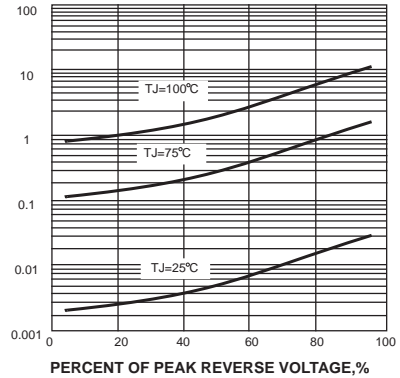
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

