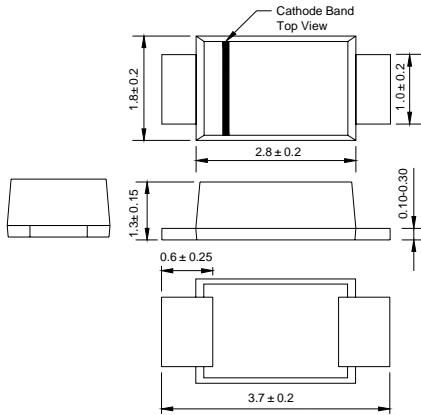


DSS12 THRU DSS110

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

SOD-123FL



Dimensions in 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: 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

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	VOLTS	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	VOLTS	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	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				Volts	
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					5.0					mA
Typical junction capacitance (NOTE 1)	C_J	110			80						pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	180										K/W
Operating junction temperature range	T_J	-55 to +125					-55 to +150					°C
Storage temperature range	T_{STG}	-55 to +150										°C

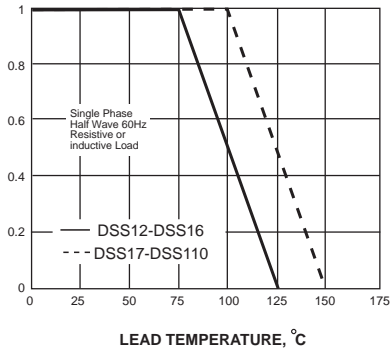
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

RATINGS AND CHARACTERISTIC CURVES DSS12 THRU DSS110

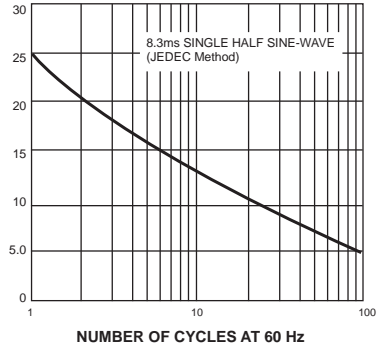
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



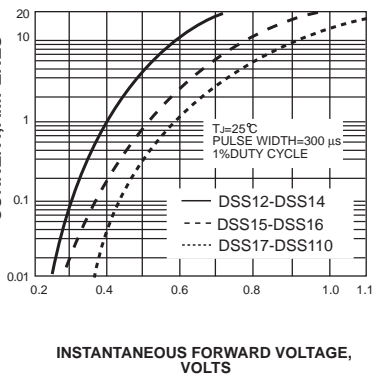
PEAK FORWARD SURGE CURRENT, AMPERES

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



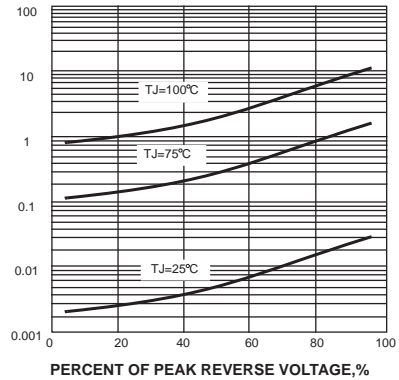
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



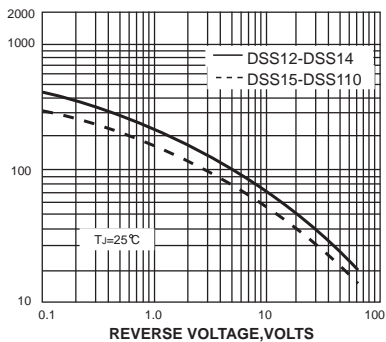
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



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