

# MSKSEMI

SEMICONDUCTOR



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PLED

Product data sheet



SOD-123FL

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

	P/N	DS12W-MS	DS13W-MS	DS14W-MS	DS15W-MS	DS16W-MS	DS18W-MS	DS19W-MS	DS110W-MS		
	MARK	K12	K13	K14	K15	K16	K18	K19	K110	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	90	100	V	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	63	70	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	90	100	V	
Maximum Average Forward Rectified Current (See Fig. 1)	I <sub>(AV)</sub>	1.0								A	
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30								A	
Maximum Instantaneous Forward Voltage at 1.0A	V <sub>F</sub>	0.55		0.70		0.85				V	
Maximum DC Reverse Current Ta=25°C	I <sub>R</sub>	0.2								mA	
at Rated DC Blocking Voltage Ta=100°C		10								mA	
Typical Junction Capacitance (Note1)	C <sub>J</sub>	110								pF	
Operating Temperature Range T <sub>J</sub>	T <sub>J</sub>	-65 — +125					-65 — +150				°C
Storage Temperature Range T <sub>STG</sub>	T <sub>STG</sub>	-65 — +150								°C	

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (K12 THRU K110)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

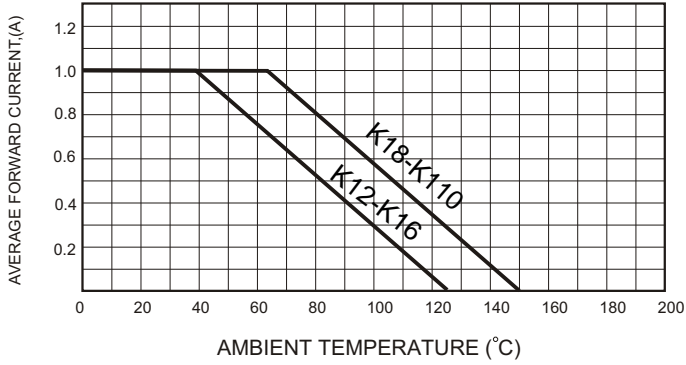


FIG.2-TYPICAL FORWARD CHARACTERISTICS

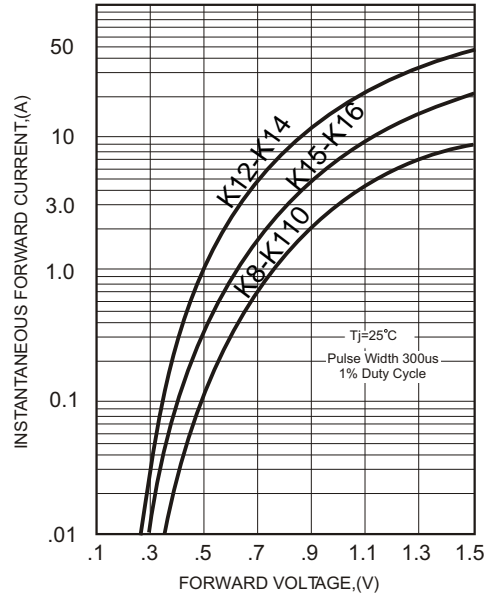


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

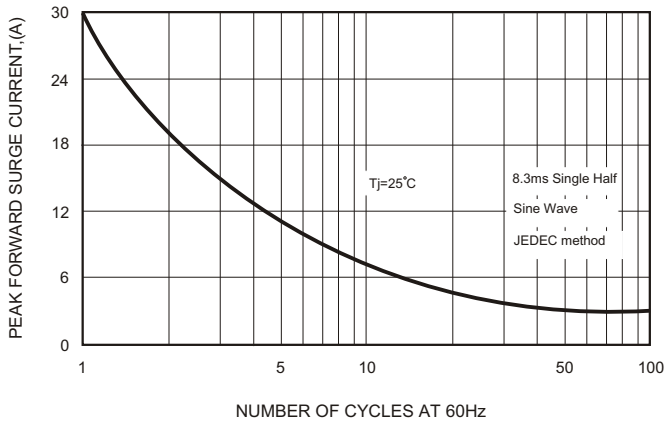


FIG.4-TYPICAL JUNCTION CAPACITANCE

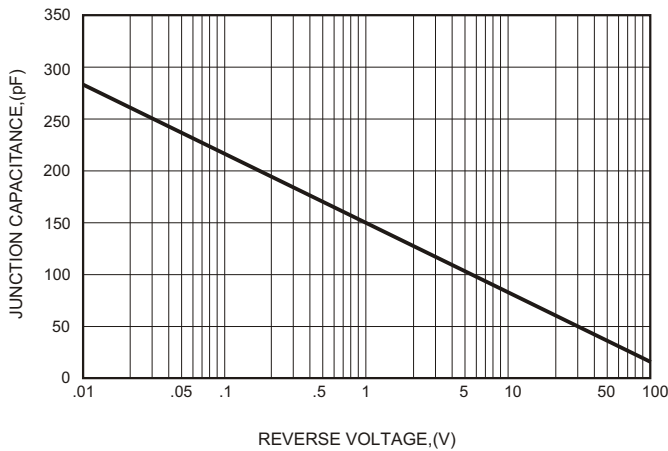
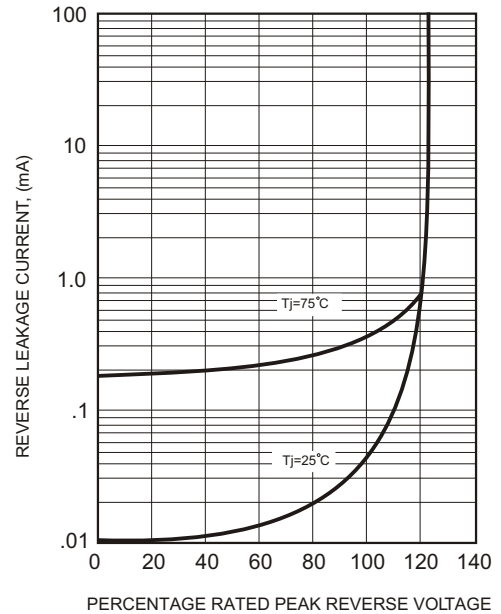
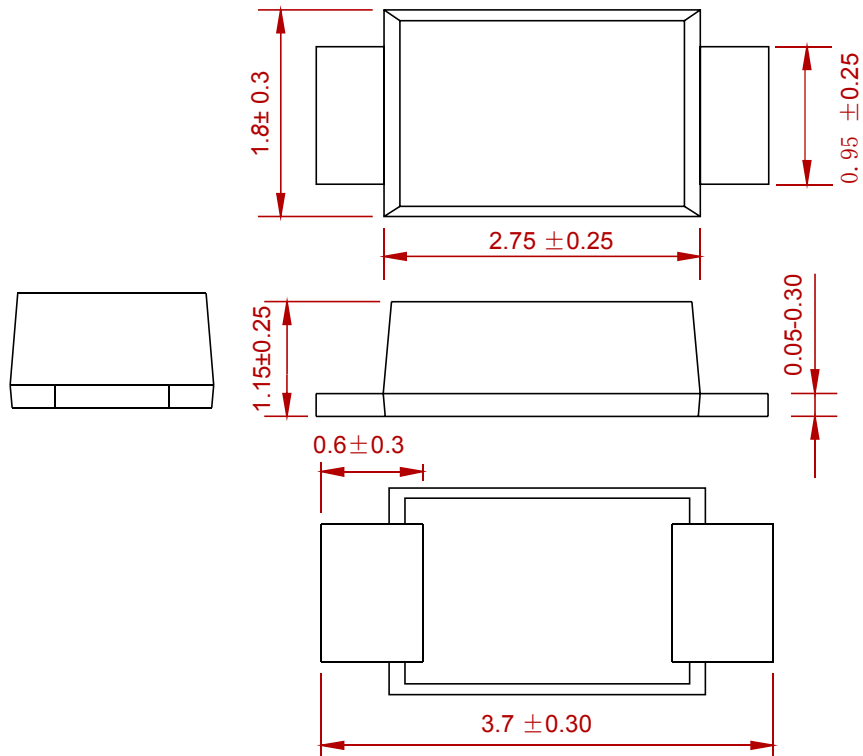


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

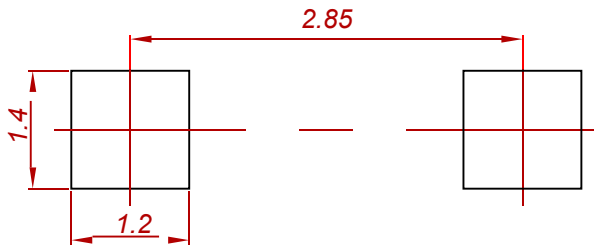


**PACKAGE MECHANICAL DATA**



*Dimensions in millimeters*

**Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
DS12W-MS THRU DS110W-MS	SOD-123FL	3000

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