

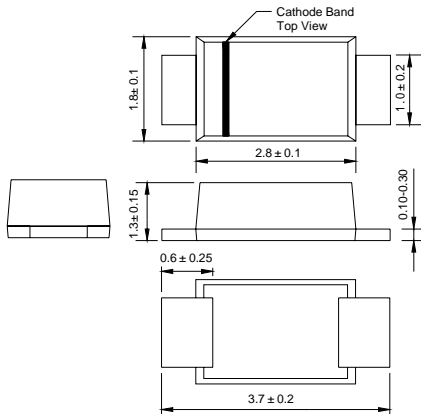


# DSK12 THRU DSK120

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

### SOD-123FL



### 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

## 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%.

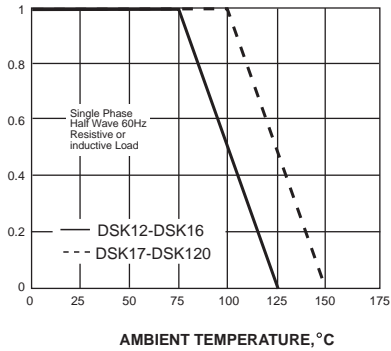
MDD Catalog Number	SYMBOLS	DSK12 K12	DSK13 K13	DSK14 K14	DSK15 K15	DSK16 K16	DSK17 K17	DSK18 K18	DSK19 K19	DSK110 K110	DSK115 K115	DSK120 K120	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	150	200	VOLTS
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	105	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 $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5					2.0					mA	
		10.0					5.0					2.0	
Typical junction capacitance (NOTE 1)	$C_J$	110					80					pF	
Operating junction temperature range	$T_J$	-65 to +125					-65 to +150					°C	
Storage temperature range	$T_{STG}$	-65 to +150											°C

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

# RATINGS AND CHARACTERISTIC CURVES DSK12 THRU DSK120

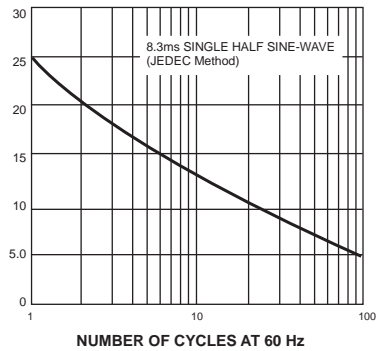
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



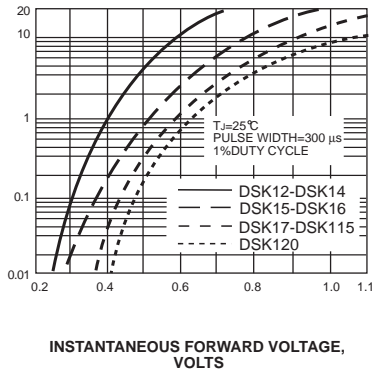
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



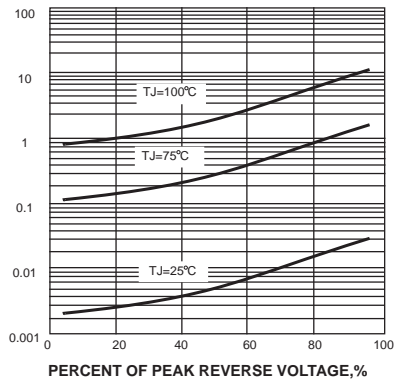
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



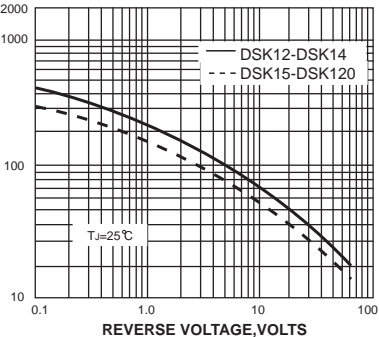
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



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