



# DSK12G THRU DSK120G

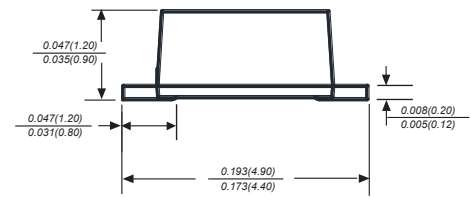
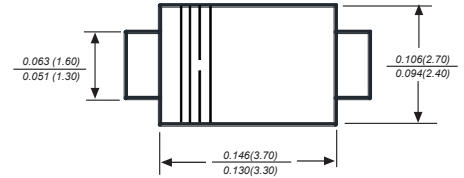
Reverse Voltage - 20 to 200 Volts Forward Current - 1.0 Ampere

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250 °C/10 seconds at terminals

SOD-123FL **RoHS COMPLIANT**



Dimensions in inches and (millimeters)

### 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%.

Parameter	SYMBOLS	DSK12G	DSK14G	DSK15G	DSK16G	DSK18G	DSK110G	DSK1150G	DSK1200G	UNITS	
		MDD K12	MDD SS14	MDD SS15	MDD SS16	MDD SS18	MDD SS110	MDD SS1150	MDD SS1200		
Maximum repetitive peak reverse voltage	$V_{RMM}$	20	40	50	60	80	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	20	40	50	60	80	100	150	200	V	
Maximum average forward rectified current at TL (see fig.1)	$I_{(AV)}$	1.0								A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25								A	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55		0.70		0.85		0.90		V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25$ $T_A=125$	$I_R$	0.3				0.2		0.1		mA	
		10.0				5.0		2.0			
Typical junction capacitance (NOTE 1)	$C_J$	110			80					pF	
Typical thermal resistance (NOTE 2)	$R_{TJA}$	100.0									W
Operating junction temperature range	$T_J$	-55 to +125									
Storage temperature range	$T_{STG}$	-55 to +150									

**Note:** 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas.  
 3. The typical data above is for reference only.



## Typical Characteristics

Fig.1 Forward Current Derating Curve

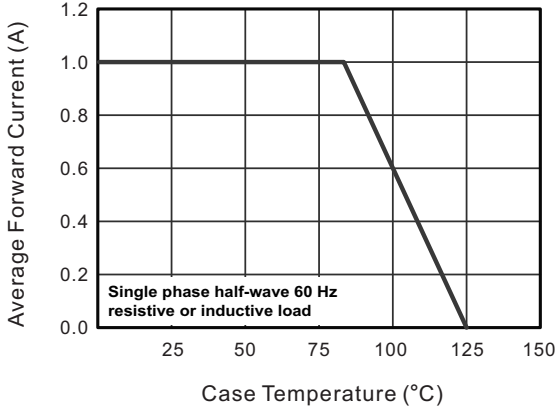


Fig.2 Typical Reverse Characteristics

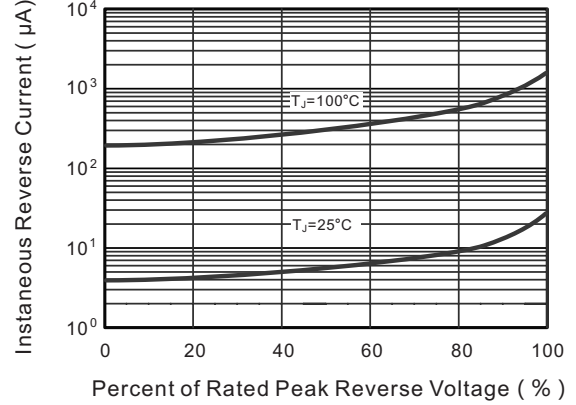


Fig.3 Typical Forward Characteristic

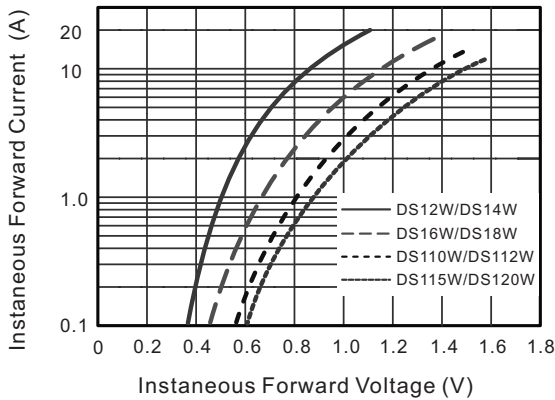


Fig.4 Typical Junction Capacitance

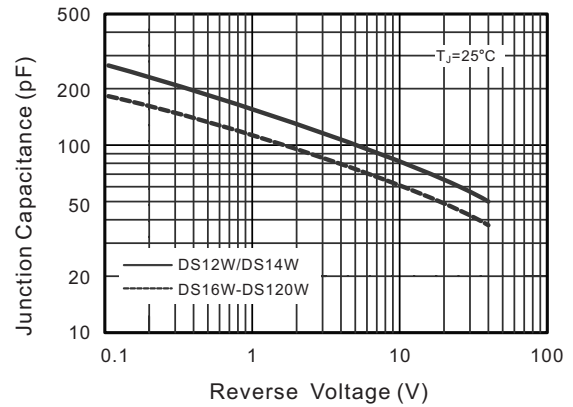


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

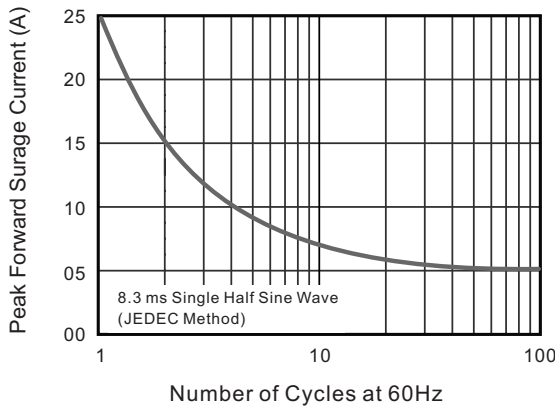
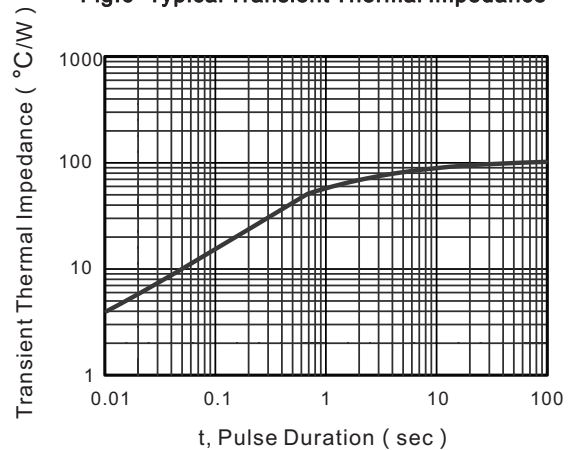


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.



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## Packing information



unit:mm

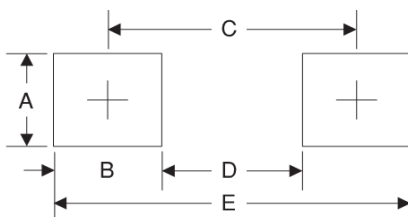
Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	50.0
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173

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