

1.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

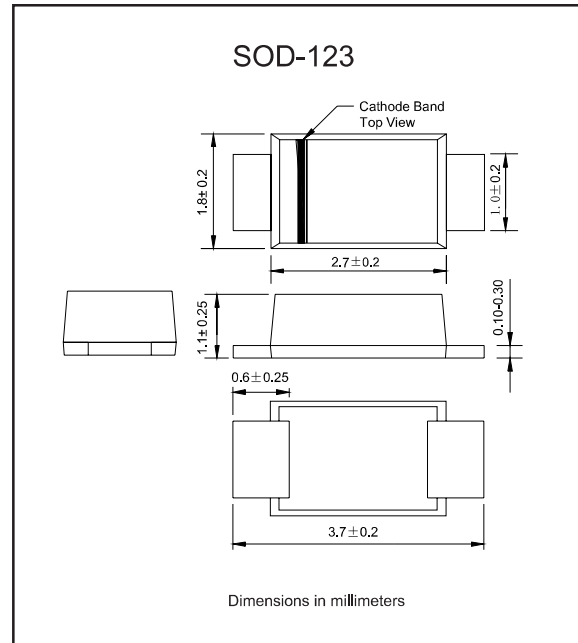
Features

- ▶ 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
- ▶ Compliant to RoHS Directive 2011/65/EU
- ▶ Compliant to Halogen-free

Mechanical data

- ▶ **Case**: JEDEC SOD-123 molded plastic body
- ▶ **Terminals**: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ▶ **Polarity**: Color band denotes cathode end
- ▶ **Mounting Position**: Any
- ▶ **Weight**: 0.0007 ounce, 0.02 grams

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			25	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				10	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		92		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		110		pF
Storage temperature		T_{STG}	-65		+150	$^\circ\text{C}$

Note: 1.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J , ($^\circ\text{C}$)
DSK12	20	14	20	0.55	-55 to +125
DSK13	30	21	30		
DSK14	40	28	40		
DSK15	50	35	50	0.70	-55 to +150
DSK16	60	42	60		
DSK18	80	56	80	0.85	
DSK110	100	70	100		
DSK115	150	105	150	0.92	
DSK120	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=1.0\text{A}$

Rating and characteristic curves (DSK12 THRU DSK120)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

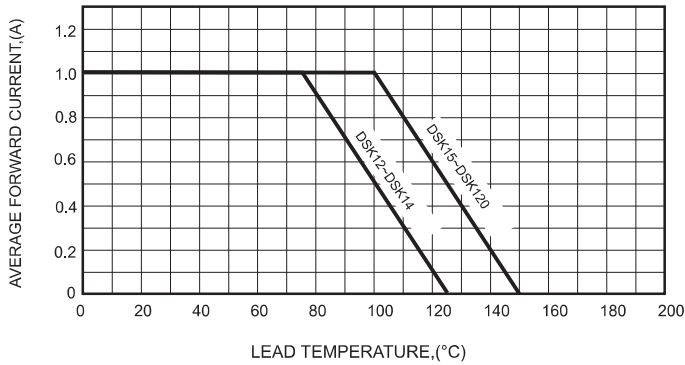


FIG.2-TYPICAL FORWARD CHARACTERISTICS

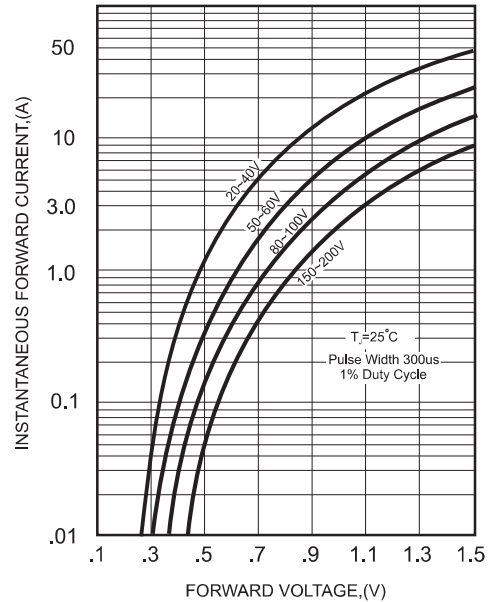


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

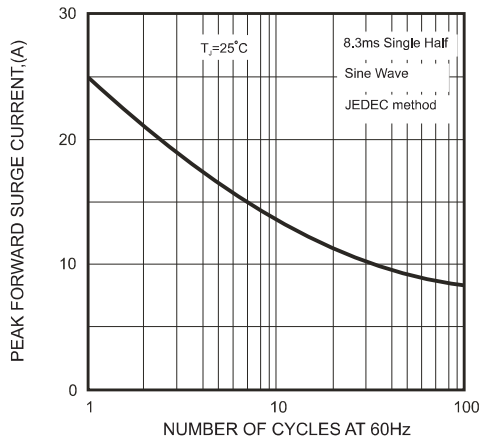


FIG.4-TYPICAL JUNCTION CAPACITANCE

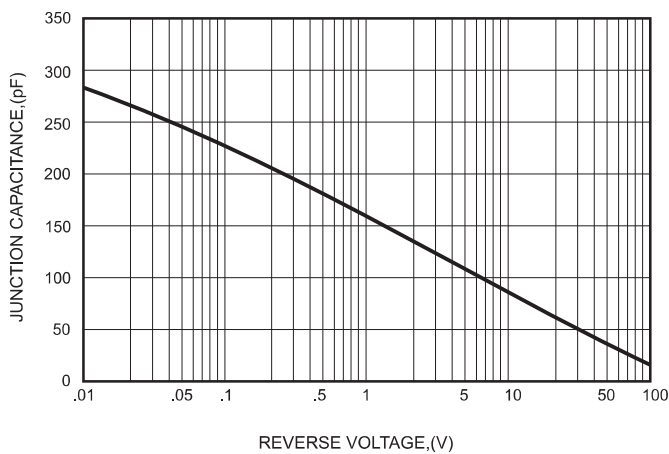
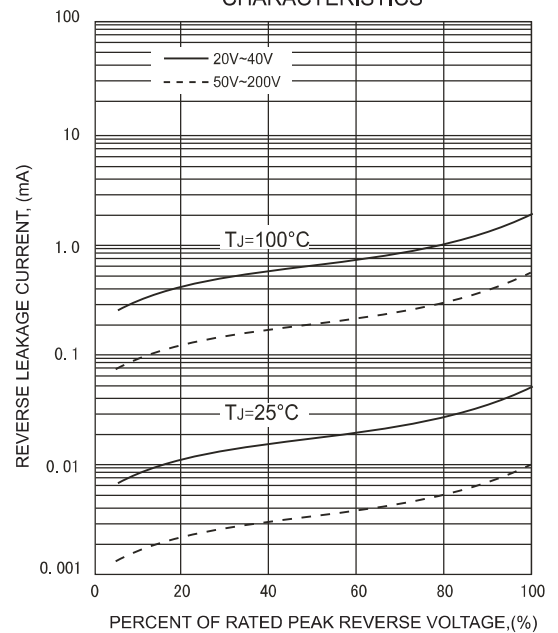




FIG.5 - TYPICAL REVERSE CHARACTERISTICS



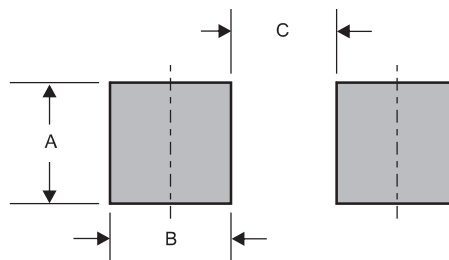
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSK12	12
DSK13	13
DSK14	14
DSK15	15
DSK16	16
DSK18	18
DSK110	10
DSK115	115
DSK120	120

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)