DSK12 THRU DSK120

Surface Mount Schottky Rectifiers

Reverse Voltage - 20 to 200 V
Forward Current - 1.0 A

FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg 0.00048oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Marking Code : K12-K120

Simplified outline SOD-123FL and symbol

Maximum Ratings and Electrical characteristics

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

Parameter	Symbols	DSK12	DSK14	DSK16	DSK18	DSK110	DSK112	DSK115	DSK120	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40				30				A
Max Instantaneous Forward Voltage at 1 A	V_F	0.55		0.70		0.85		0.95		V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	0.3 10				0.2 5		0.1 2		mA
Typical Junction Capacitance [1]	C_j	110		80						pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	115								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125								°C
Storage Temperature Range	T_{stg}	-55 ~ +150								°C

1) Measured at 1MHz and applied reverse voltage of 4 V D.C.
2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

Characteristic Curves (T =25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

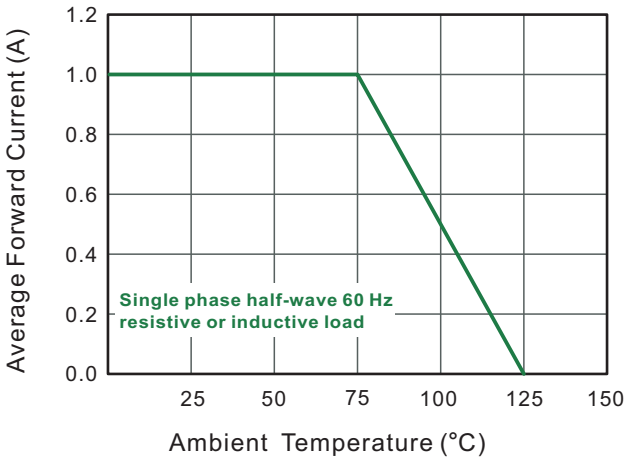


Fig.2 Typical Reverse Characteristics

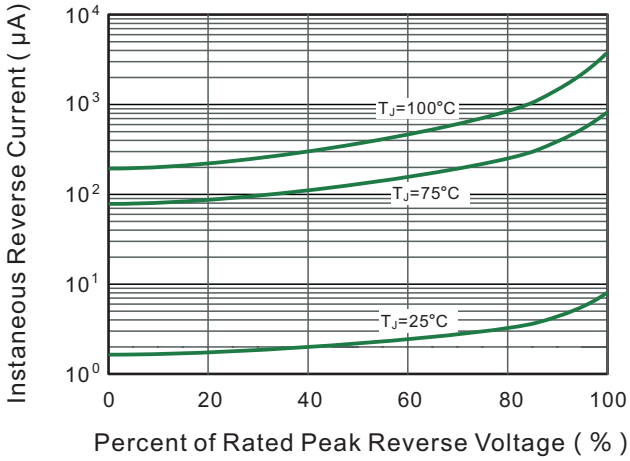


Fig.3 Typical Forward Characteristic

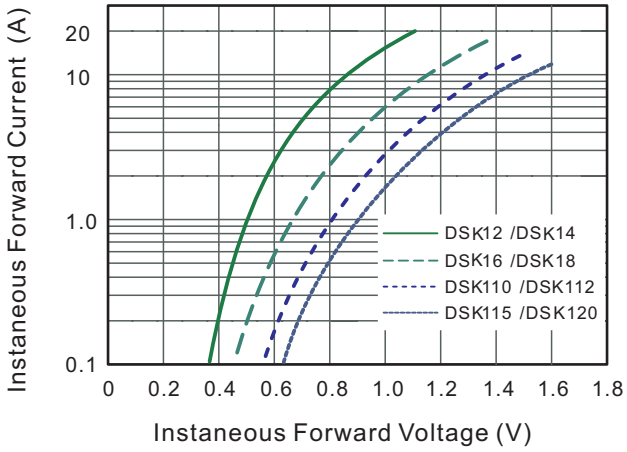


Fig.4 Typical Junction Capacitance

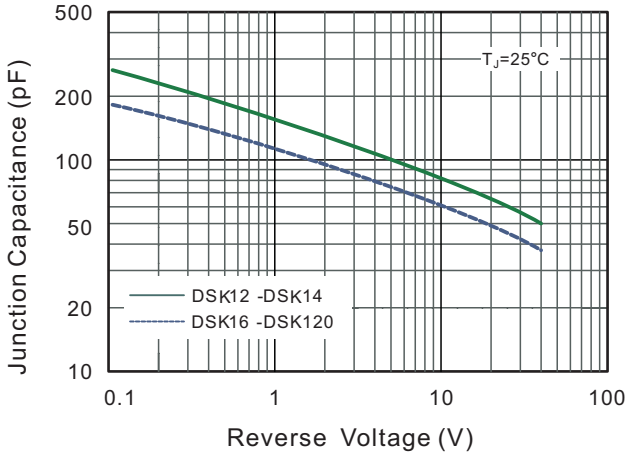


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

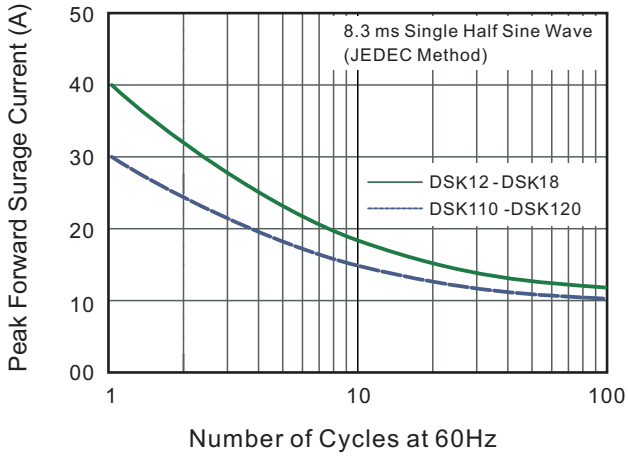
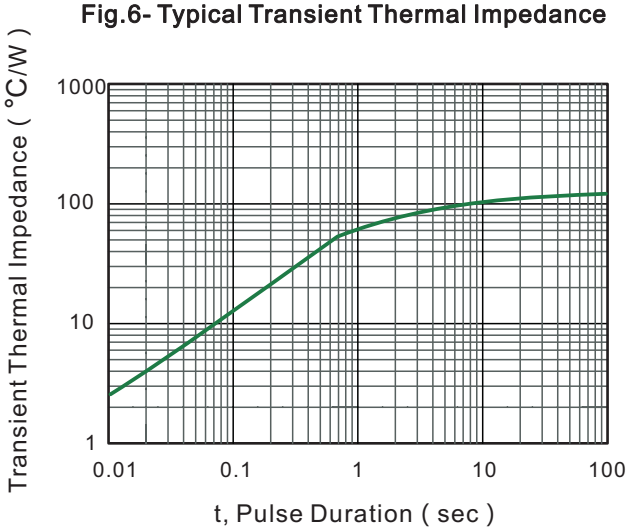


Fig.6- Typical Transient Thermal Impedance

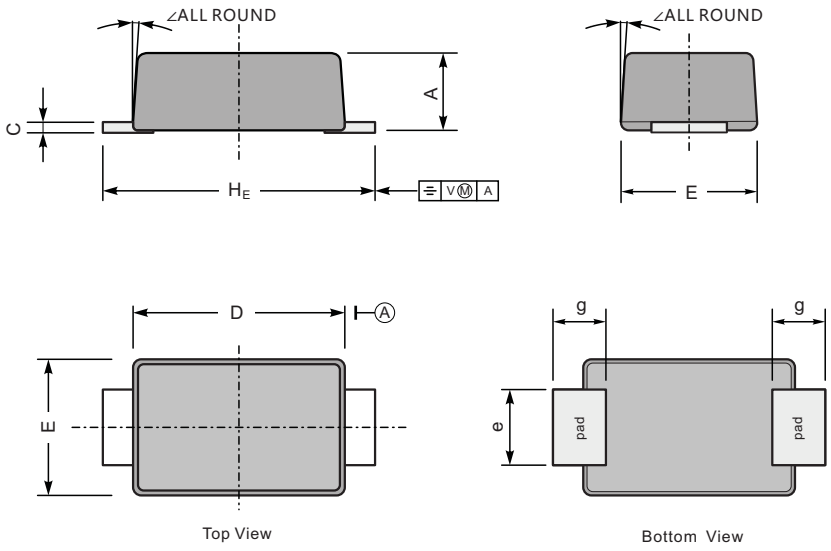


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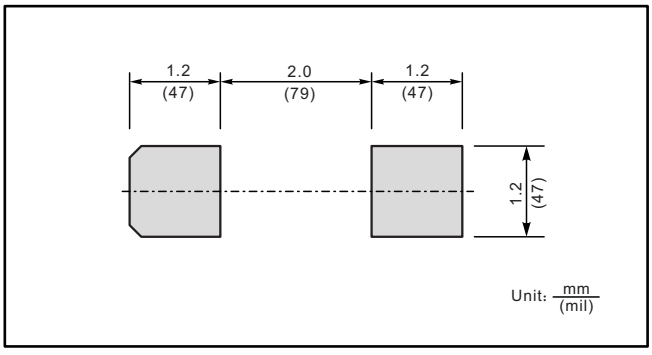
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123FL



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.27	0.20	2.9	1.95	1.1	0.9	3.8	7°
	min	0.95	0.12	2.6	1.75	0.8	0.7	3.5	
mil	max	50	7.9	114	77	43	35	150	
	min	37	4.7	102	69	31	28	138	

The recommended mounting pad size



Marking

Type number	Marking code
DSK12	K12
DSK14	K14
DSK16	K16
DSK18	K18
DSK110	K110
DSK112	K112
DSK115	K115
DSK120	K120