DSL12W THRU DSL16W

Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 20 to 60V
Forward Current - 1.0 A

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Simplified outline SOD-123FL and symbol

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

Absolute 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, derate by 20 %

Parameter	Symbols	DSL12W	DSL14W	DSL16W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	V
Maximum RMS voltage	V_{RMS}	14	28	42	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	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}	30			A
Max Instantaneous Forward Voltage at 1 A	V_F	0.45		0.5	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		mA
Typical Junction Capacitance (1)	C_j	180		80	pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	90			°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125			°C
Storage Temperature Range	T_{stg}	-55 ~ +150			°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

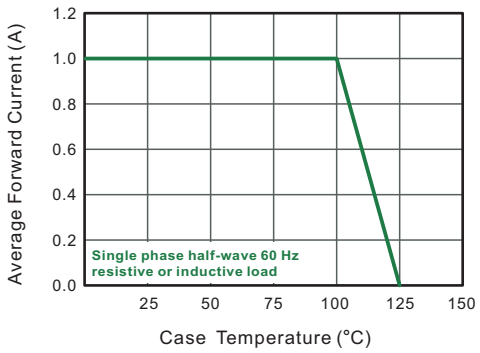


Fig.2 Typical Reverse Characteristics

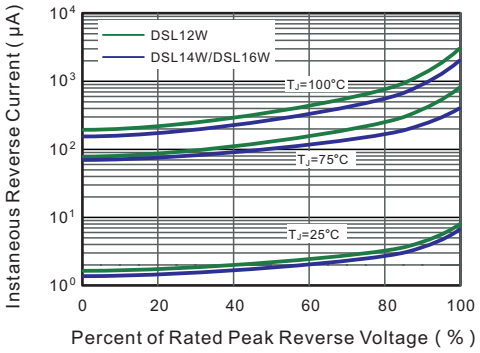


Fig.3 Typical Forward Characteristic

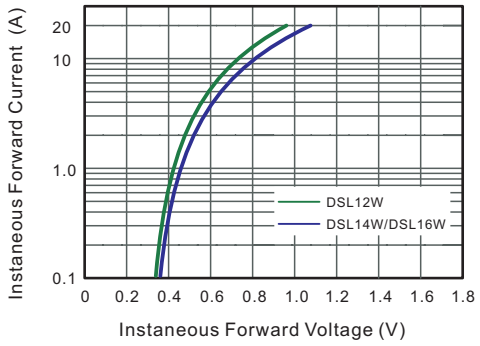


Fig.4 Typical Junction Capacitance

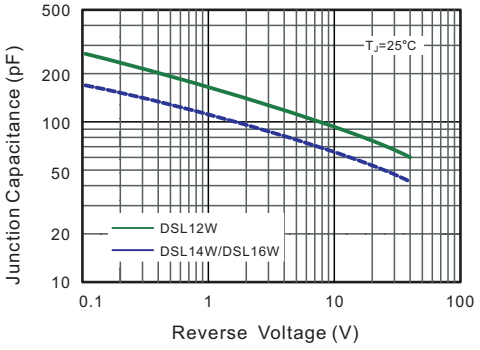


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

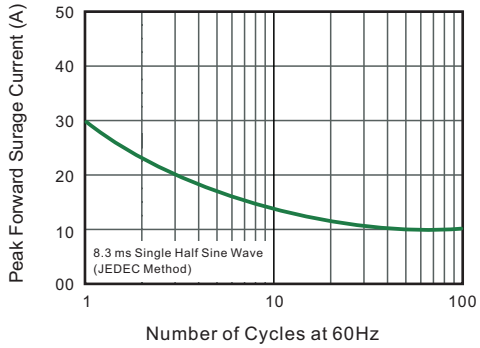
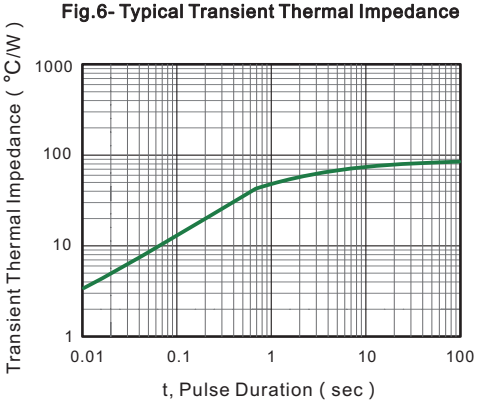
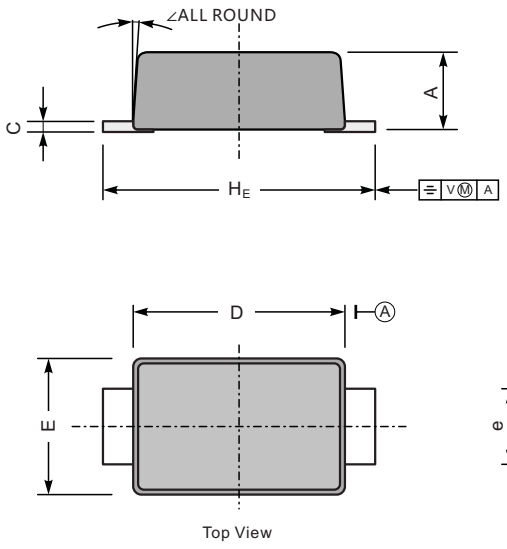


Fig.6- Typical Transient Thermal Impedance



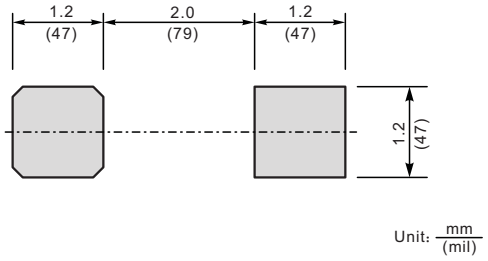
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123FL



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Marking

Type number	Marking code
DSL12W	SL12
DSL14W	SL14
DSL16W	SL16