DSL12 THRU DSL16

Reverse Voltage - 20 to 60 Volts Forward Current - 1.0 Ampere

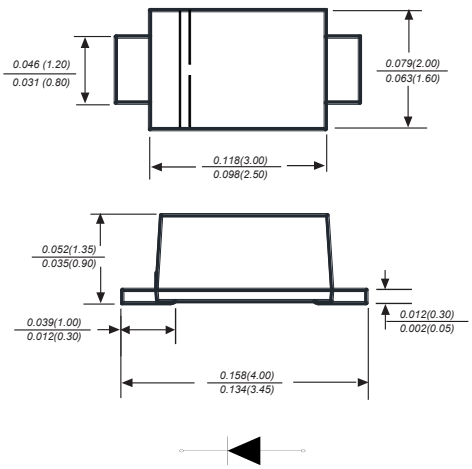
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

SOD-123FL

RoHS COMPLIANT

- 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



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	DSL12	DSL14	DSL16	UNITS
Marking Code		D12	D14	D16	
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 at	$I_{(AV)}$	1.0			A
Peak forward surge current,8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	30			A
Maximum instantaneous forward voltage at 1.0A	V_F	0.45		0.50	V
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ T_A=100℃	I_R	0.3 10.0	0.2 5.0		mA
Typical junction capacitance (NOTE 1)	C_J	180		80	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	90			℃/W
Operating junction temperature range	T_J	-55 to +125			℃
Storage temperature range	T_{STG}	-55 to +150			℃

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.PCB mounted on 2.0*2.0" (5.0*5.0mm) coppeer pad area.

Typical Characterisitics

Fig.1 Forward Current Derating Curve

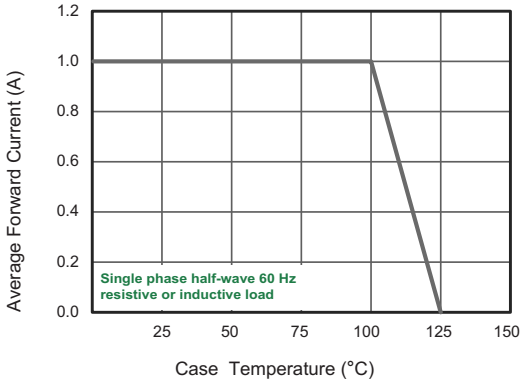


Fig.2 Typical Reverse Characteristics

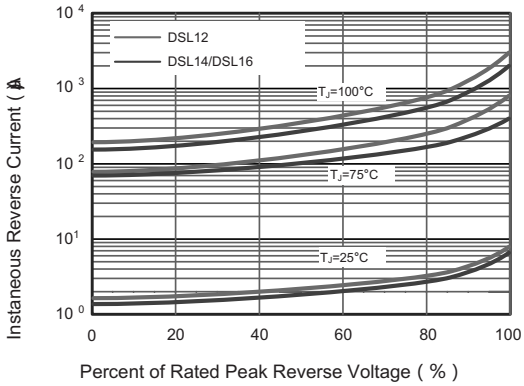


Fig.3 Typical Forward Characteristic

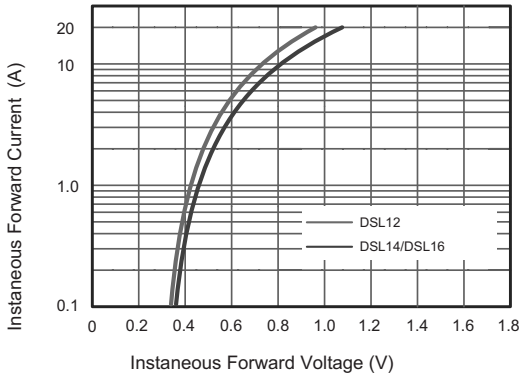


Fig.4 Typical Junction Capacitance

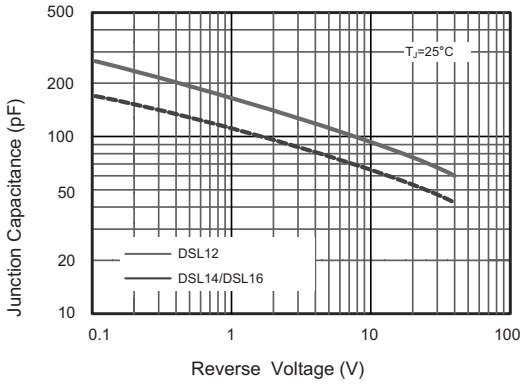


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

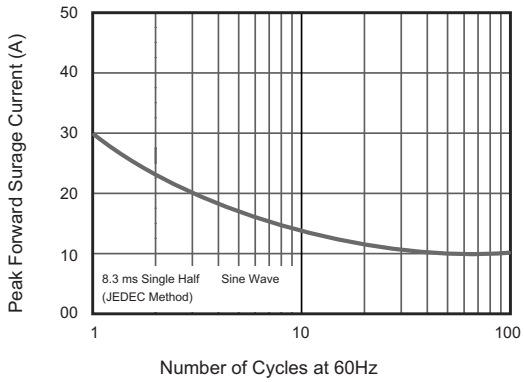
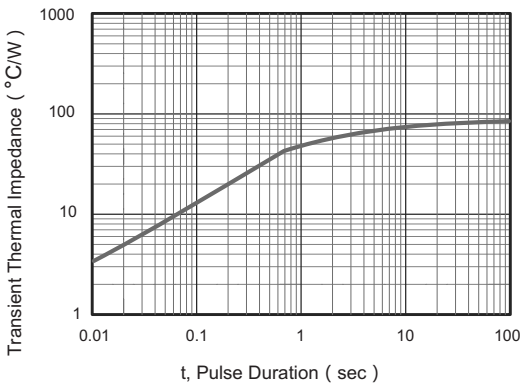
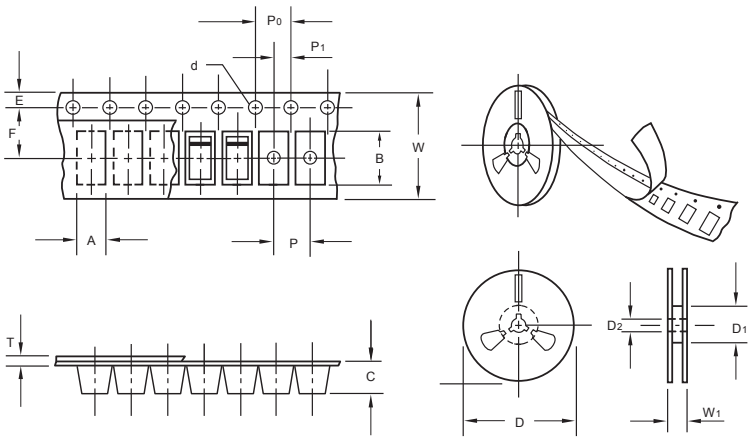


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.

Packing information



unit:mm

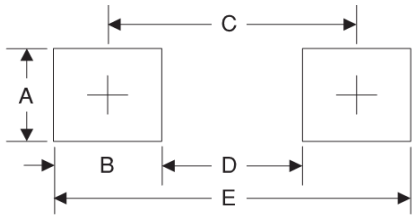
Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	50.0
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W_1	1.0	10.5

Note:Devices are packed in accor dance with EIA standar 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