

**SURFACE MOUNT SCHOTTKY
BARRIER RECTIFIER**
VOLTAGE RANGE 20 to 200 Volts CURRENT 3.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * P/N suffix V means AEC-Q101 qualified
- * P/N suffix V means Halogen-free

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O
- * Approx. Weight:15mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Marking Code: DS32W ---S32
DS34W ---S34
DS36W ---S36
DS38W ---S38
DS310W ---S310
DS312W ---S312
DS315W ---S315
DS320W ---S320

Simplified outline SOD-123F(L) and symbol

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	DS32W	DS34W	DS36W	DS38W	DS310W	DS312W	DS315W	DS320W	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	40	60	80	100	120	150	200	Volts
Maximum RMS Voltage	V _{RMS}	14	28	42	56	70	84	105	140	Volts
Maximum DC Blocking Voltage	V _{DC}	20	40	60	80	100	120	150	200	Volts
Maximum Average Forward Rectified Current at Ambient Temperature	I _O	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	80								Amps
Typical Current Square Time	I ² T	26.6								A ² S
Typical Thermal Resistance (Note 1)	R _{θJA}	80								°C/W
Typical Thermal Resistance (Note 1)	R _{θJL}	17								°C/W
Typical Junction Capacitance (Note 2)	C _J	250	160							pF
Operating Temperature Range	T _J	-55 to + 150								°C
Storage Temperature Range	T _{STG}	-55 to + 150								°C

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	DS32W	DS34W	DS36W	DS38W	DS310W	DS312W	DS315W	DS320W	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	.55		.70		.85		.95		Volts
Maximum Average Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	0.5				0.3				mA
at Rated DC Blocking Voltage @ $T_A = 150^\circ\text{C}$		80				40				mA

NOTES : 1. Thermal Resistance :Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2017-12/08
REV: O

RATING AND CHARACTERISTICS CURVES (DS32W THRU DS320W)

Fig.1 Forward Current Derating Curve

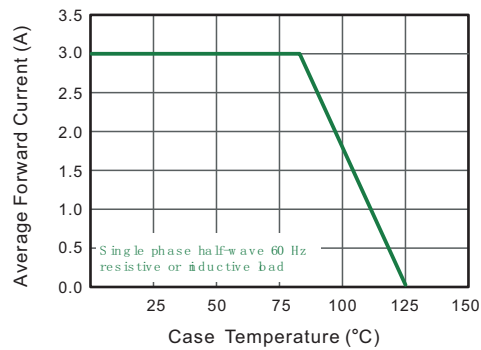


Fig.2 Typical Reverse Characteristics

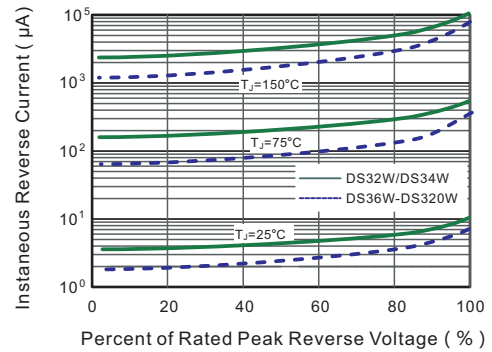


Fig.3 Typical Forward Characteristic

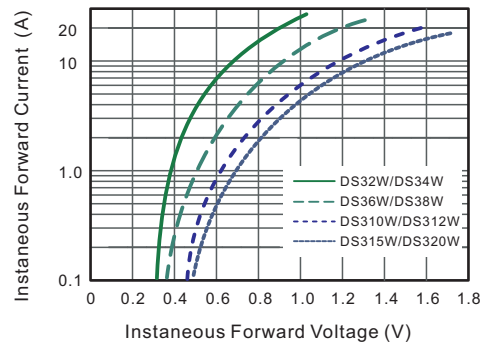


Fig.4 Typical Junction Capacitance

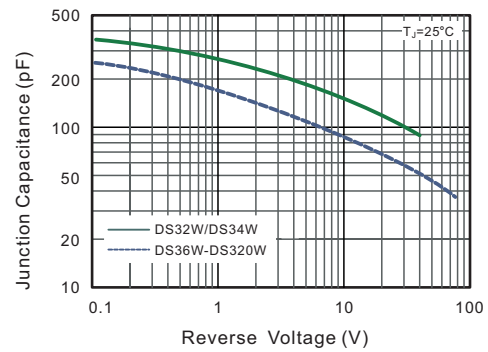


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

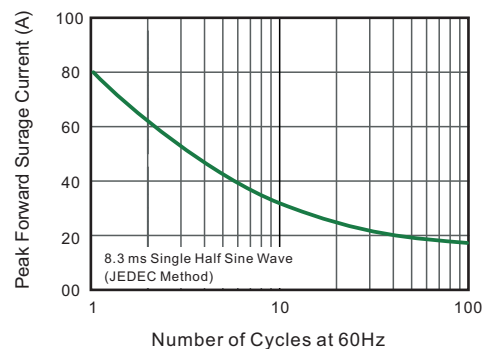
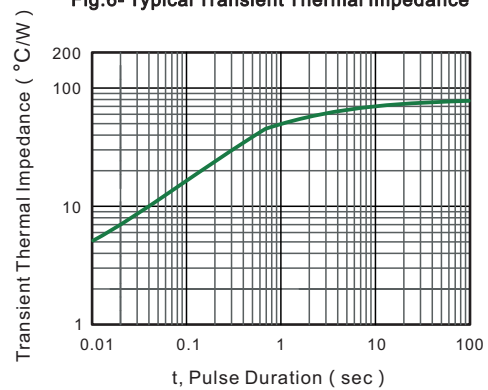


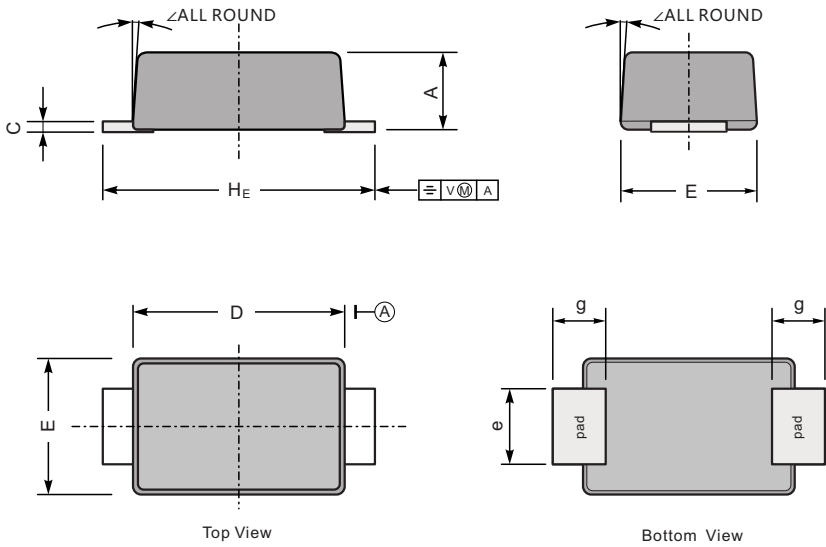
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

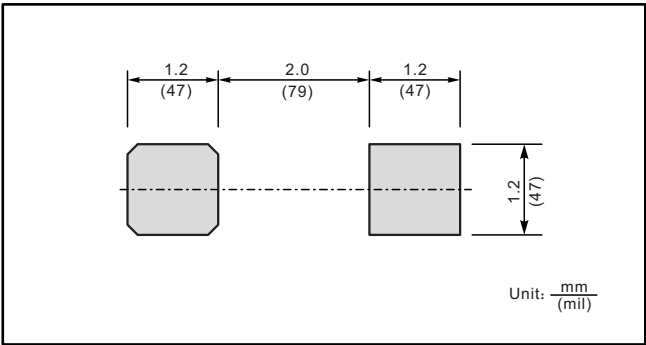
Plastic surface mounted package; 2 leads

SOD123F(L)



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
DS32W	S32
DS34W	S34
DS36W	S36
DS38W	S38
DS310W	S310
DS312W	S312
DS315W	S315
DS320W	S320

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F(L)	-W/T	3,000	15,000	---	---	178	390*205*310	120,000	6.964

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