

SDB12W THRU SDB120W-HAF

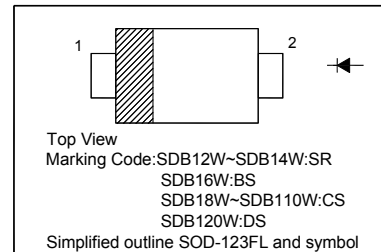
Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 20 to 200 V
Forward Current - 1 A

Features

- Halogen and Antimony Free(HAF), RoHS compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings and Characteristics

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

Parameter	Symbols	SDB12W	SDB14W	SDB16W	SDB18W	SDB110W	SDB120W	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	200	V
Maximum RMS Voltage	V_{RMS}	14	28	42	56	80	141	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	200	V
Maximum Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	1						A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40						A
Maximum Forward Voltage at 1 A and 25°C	V_F	0.55		0.7		0.85		V
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R			0.1			0.002	mA
				10			10	
Typical Junction Capacitance	C_J			110 ¹⁾			23 ²⁾	pF
Typical Thermal Resistance ³⁾	$R_{\theta JA}$			75			132	°C/W
Operating Junction Temperature Range	T_j			- 55 to + 125				°C
Storage Temperature Range	T_{stg}			- 55 to + 150				°C

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V.

²⁾ Measured at 1 MHz and applied reverse voltage of 5 V.

³⁾ Thermal resistance junction to ambient 0.24" x 0.24" (6 x 6 mm) copper pads to each terminals

TOP DYNAMIC



SDB12W THRU SDB120W-HAF

FIG.1 FORWARD CURRENT DERATING CURVE

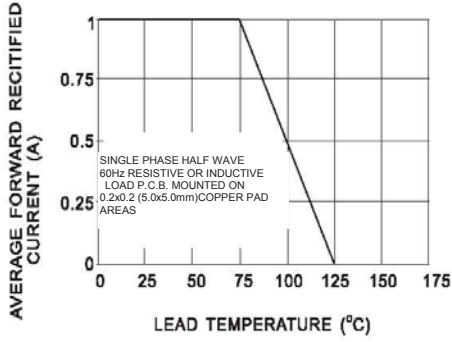


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

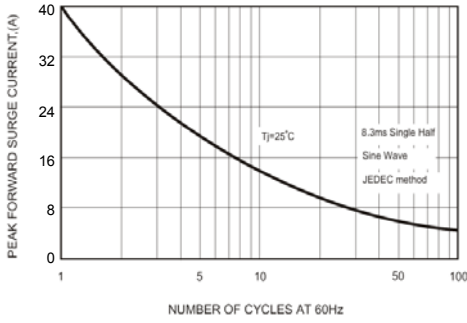


FIG.4-TYPICAL JUNCTION CAPACITANCE

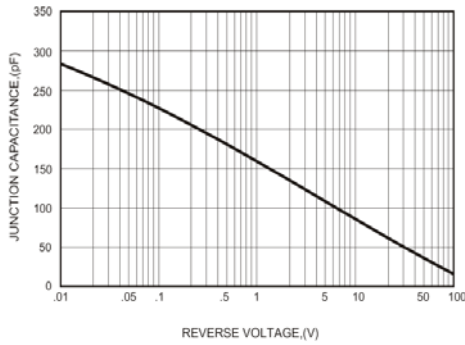


FIG.2-TYPICAL FORWARD CHARACTERISTICS

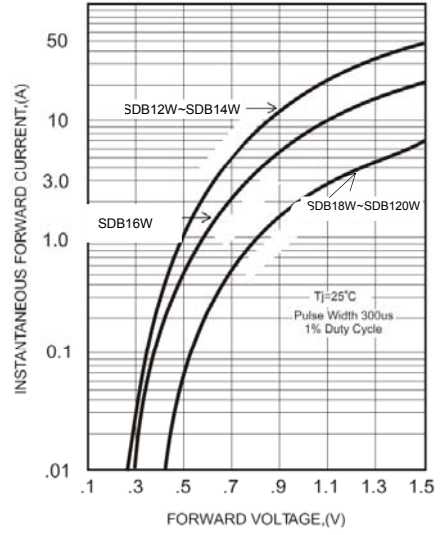
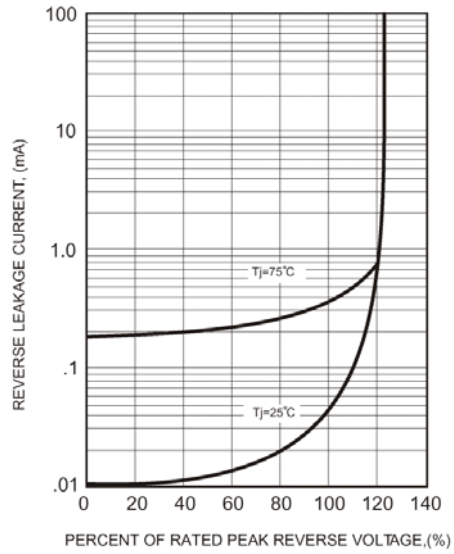


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



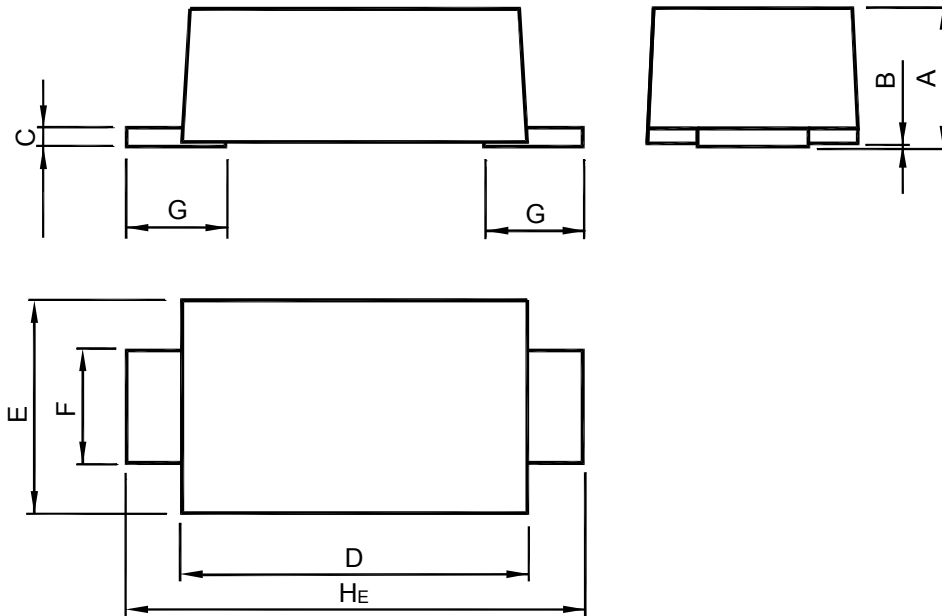
TOP DYNAMIC

SDB12W THRU SDB120W-HAF

PACKAGE OUTLINE

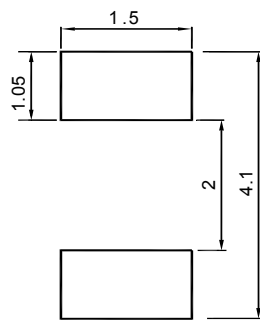
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08	0.1	0.2	2.9	1.9	1.1	0.9	3.9
	0.88	0	0.1	2.6	1.7	0.8	0.7	3.5

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

TOP DYNAMIC