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

Features
- Low profile package• Ideal for automated placement
- Low leakage current
- Halogen and Antimony Free(HAF), RoHS compliant

Application
For use in high frequency inverters, freewheeling, DC/DC converters, and polarity protection in commercial, industrial, and automotive applications.

PIN NING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: SDB12FW~SDB14FW:.SR
SDB16FW:.BS
SDB18FW~SDB110FW:.CS
SDB115FW~SDB120FW:.DS
Simplified outline SOD-123FL and symbol

Absolute Maximum Ratings and Characteristics
Ratings at T_a = 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	SDB 12FW	SDB 14FW	SDB 16FW	SDB 18FW	SDB 110FW	SDB 115FW	SDB 120FW	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	28	42	56	80	105	141	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current at T_L = 75℃	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	0.55		0.7	0.85				V
Maximum Reverse Current T_a = 25℃ at Rated DC Blocking Voltage T_a = 100℃	I_R	0.1 10					0.002 10		mA
Typical Junction Capacitance	C_J	110 [1]					23 [2]		pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	95					110		℃/W
Operating Junction Temperature Range	T_j	- 55 to + 125							℃
Storage Temperature Range	T_{stg}	- 55 to + 150							℃

[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.

Electrical Characteristics Curves

Fig 1. Forward Current Derating Curve

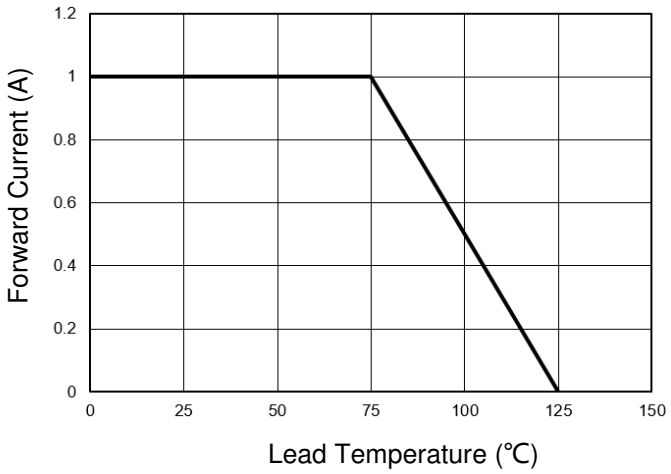


Fig 2. Forward Characteristics Curve

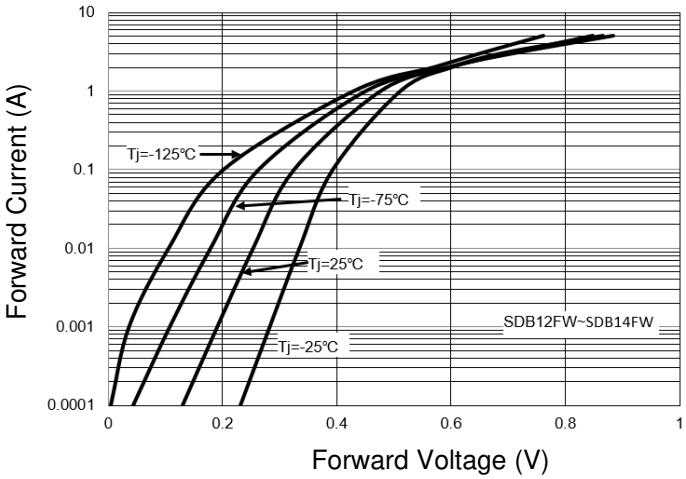


Fig 3. Forward Characteristics Curve

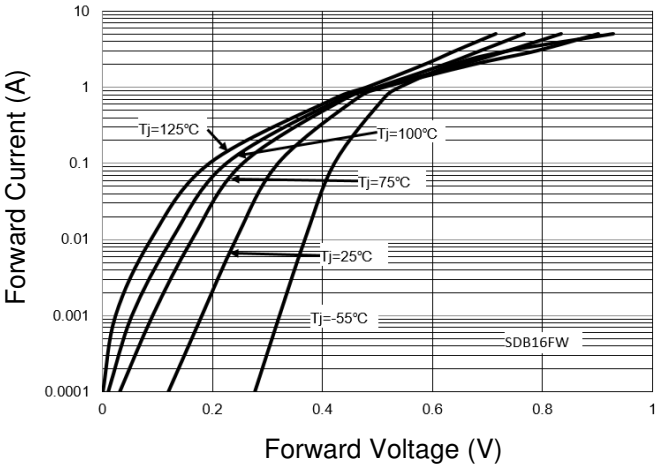


Fig 4. Forward Characteristics Curve

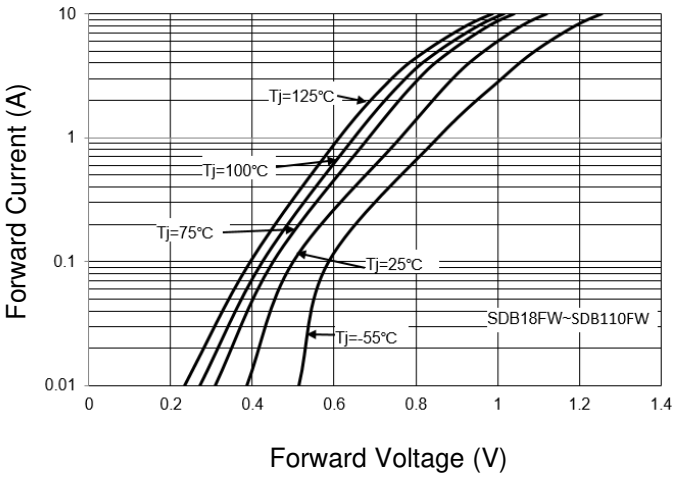


Fig 5. Forward Characteristics Curve

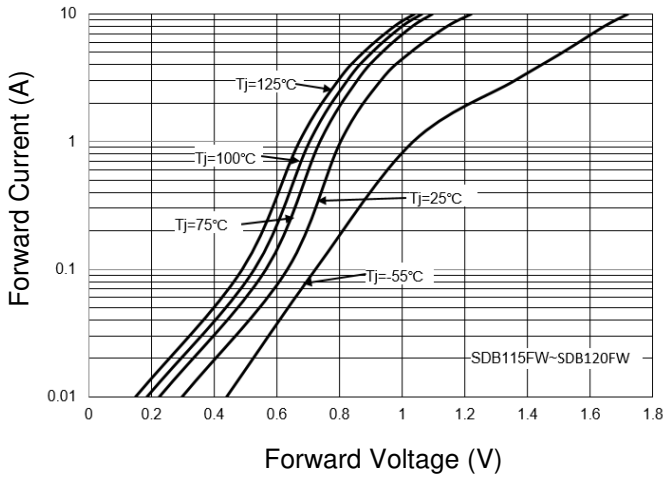
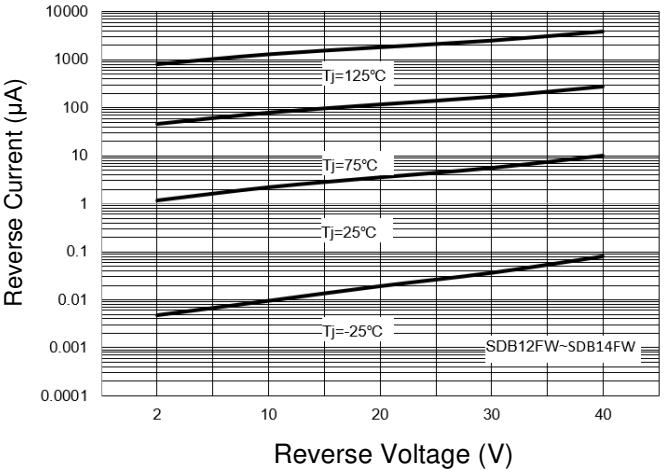


Fig 6. Reverse Characteristics Curve



Electrical Characteristics Curves

Fig 7. Reverse Characteristics Curve

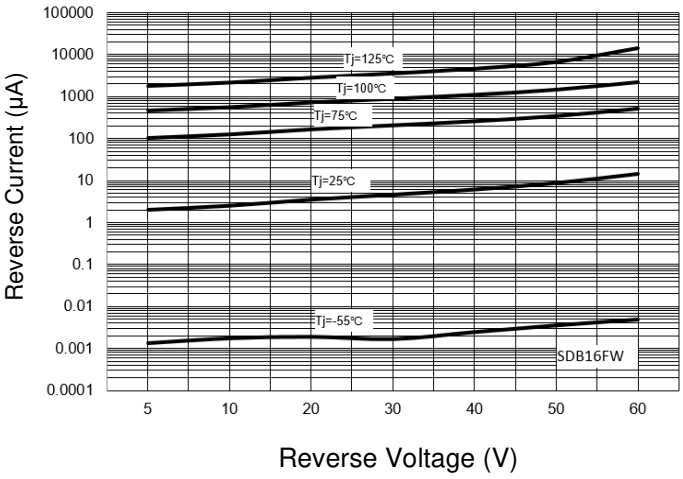


Fig 8. Reverse Characteristics Curve

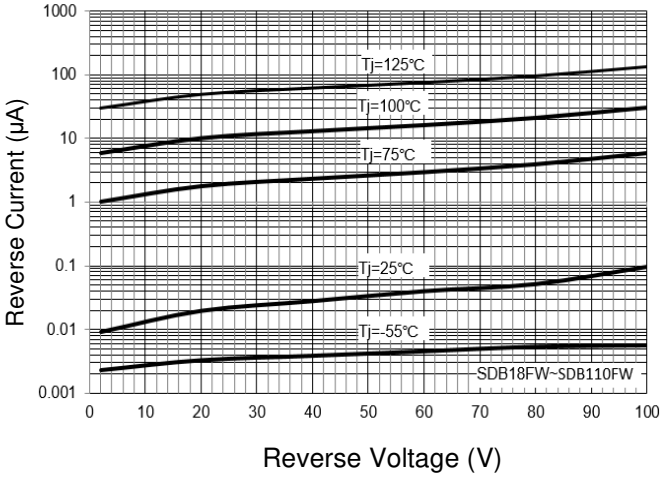


Fig 9. Reverse Characteristics Curve

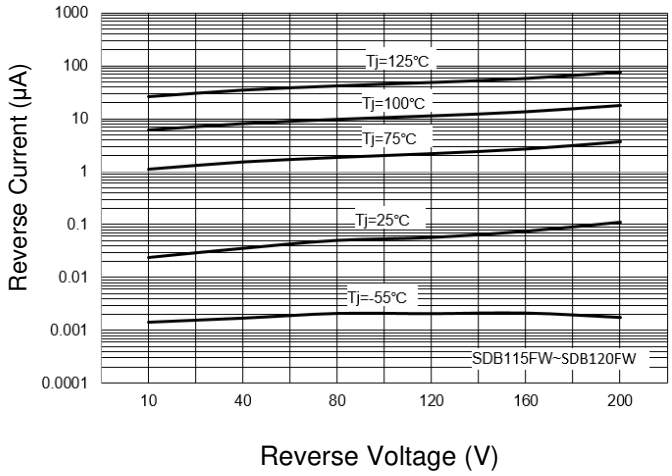


Fig 10. Junction Capacitance

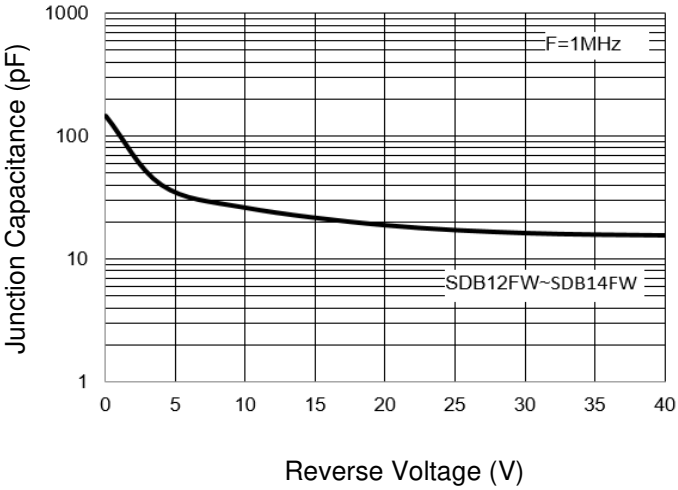


Fig 11. Junction Capacitance

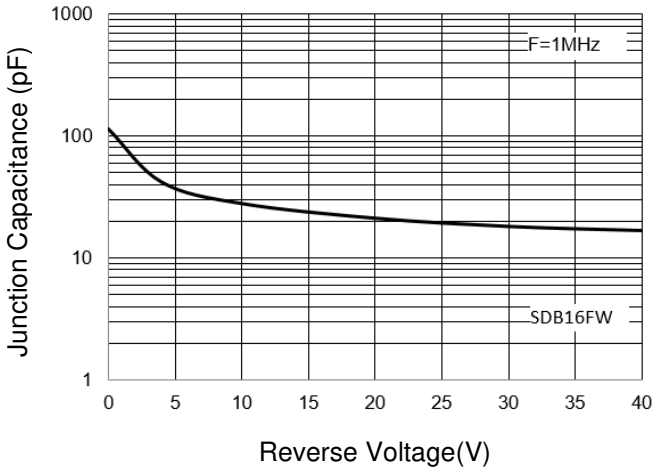
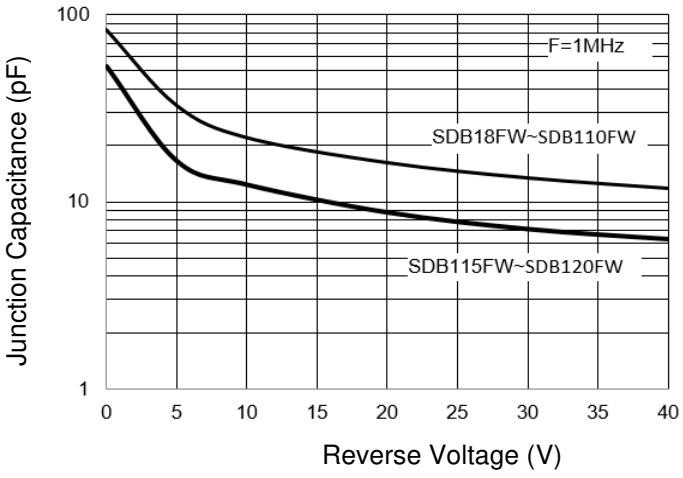
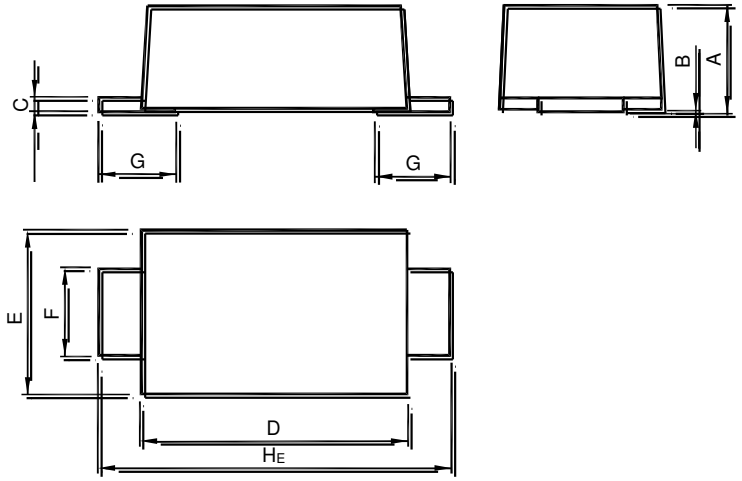


Fig 12. Junction Capacitance



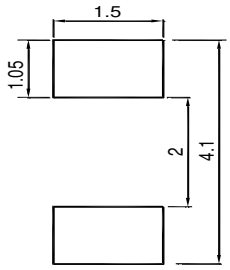
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123FL**



UNIT	A	B	C	D	E	F	G	H_E
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.7	1.9 1.7	1.1 0.8	0.85 0.45	3.9 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

Marking information

" III " = Cathode line

" • " = HAF (Halogen and Antimony Free)

" *** " = Part No.

Font type: Arial

