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SMD Schottky Barrier Rectifiers



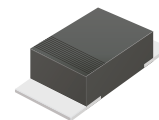
CDBFN120-HF Thru CDBFN1100-HF

Voltage: 20 to 100 Volts

Current: 1.0 Amp

RoHS Device

Halogen free

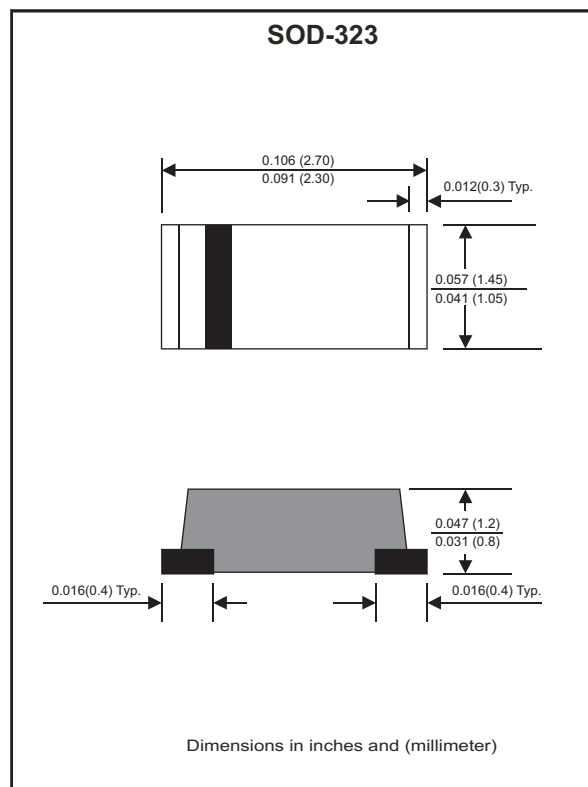


Features

- Batch process design, excellent power dissipation offers better reverse leakage current.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Very tiny plastic SMD package.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

Mechanical data

- Case: JEDEC SOD-323, Molded plastic
- Terminals: Solde plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight:0.008 gram(approx.).



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	CDBFN 120-HF	CDBFN 130-HF	CDBFN 140-HF	CDBFN 150-HF	CDBFN 160-HF	CDBFN 180-HF	CDBFN 1100-HF	Unit	
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V	
Continuous reverse voltage	V_R	20	30	40	50	60	80	100	V	
Maximum forward voltage @ $I_F=1.0A$	V_F	0.55		0.70		0.85			V	
Forward rectified current	I_O	1.0							A	
Forward surge current, 8.3ms half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A	
Reverse current on $V_R=V_{RRM}$ @ $T_A=25^\circ C$ @ $T_A=125^\circ C$	I_R					0.5			mA	
Typ. thermal resistance, junction to ambient air	$R_{\theta JA}$					90				$^\circ C/W$
Typ. diode junction capacitance (Note 1)	C_J	120							pF	
Operating junction temperature	T_J					-55 to +125		-55 to +150		$^\circ C$
Storage temperature	T_{STG}	-65 to +175							$^\circ C$	

Note 1: f=1MHz and applied 4V DC reverse voltage.

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Ratings and Characteristic Curves(CDBFN120-HF Thru CDBFN1100-HF)

Fig.1 Typical Forward Current Derating Curve

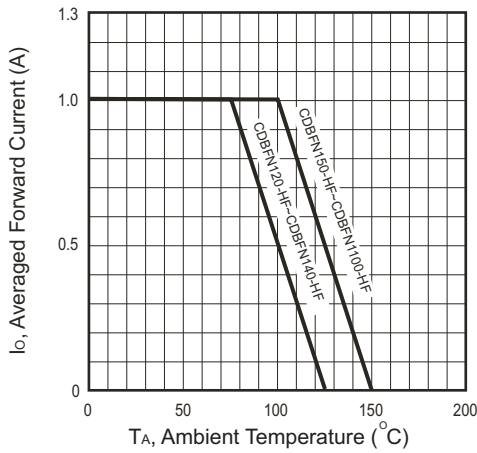


Fig.2 Typical Forward Characteristics

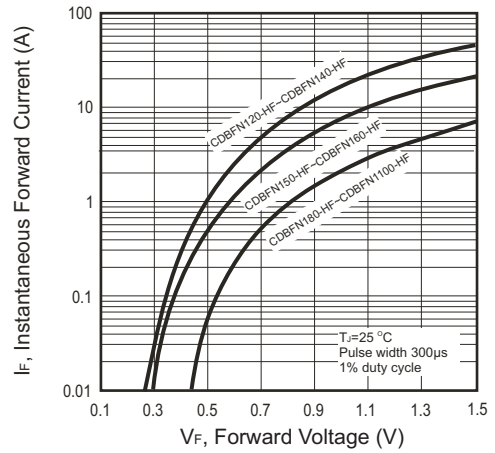


Fig.3 Maximum Non-repetitive Peak Forward Surge Current

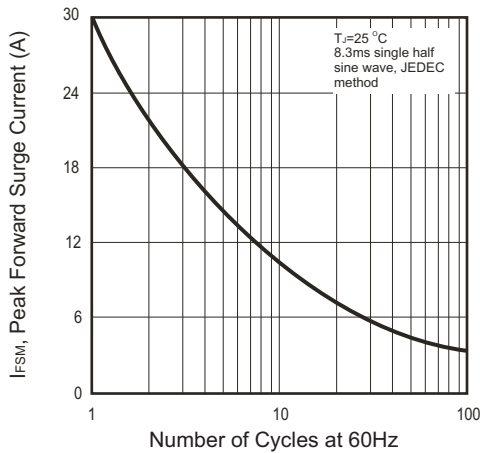


Fig.4 Typical Junction Capacitance

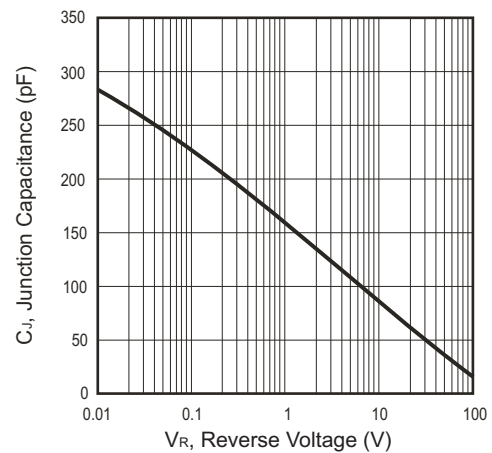
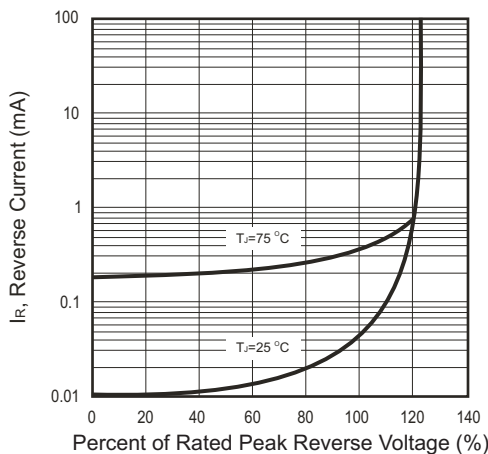


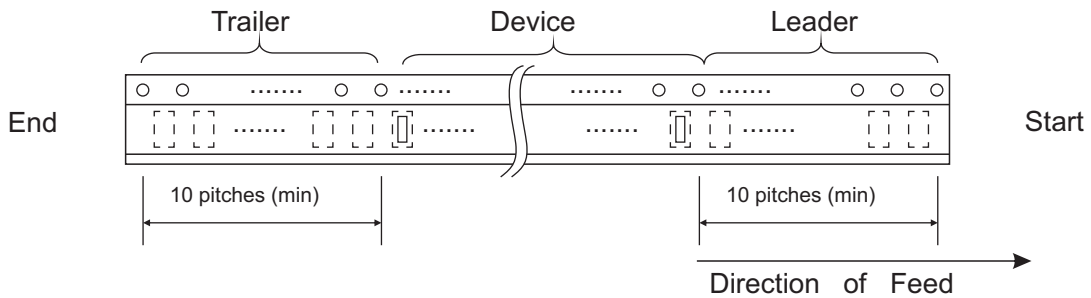
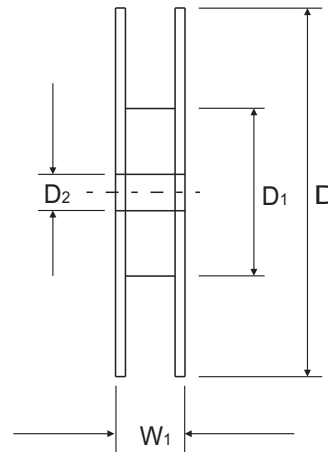
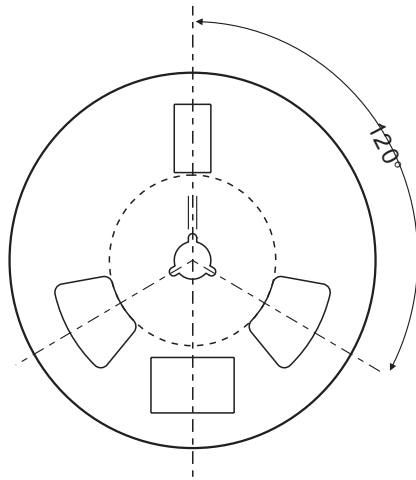
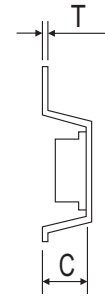
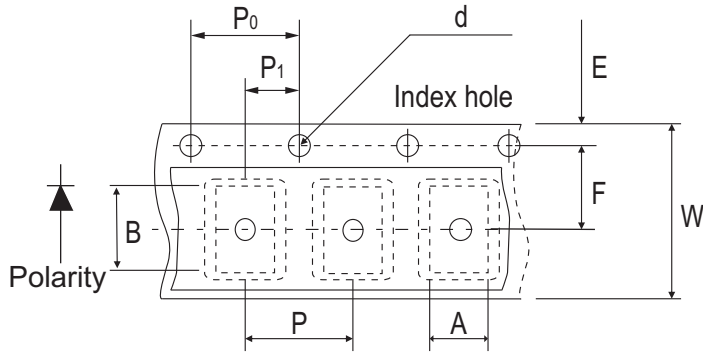
Fig.5 Typical Reverse Characteristics



SMD Schottky Barrier Diode



Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.47 ± 0.10	2.95 ± 0.10	1.15 ± 0.10	1.50 ± 0.10	178 ± 1	62.0 MIN.	13.0 ± 0.50
	(inch)	0.057 ± 0.004	0.116 ± 0.004	0.045 ± 0.004	0.059 ± 0.004	7.008 ± 0.040	2.44 MIN.	0.512 ± 0.0197

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 ± 0.30	11.4 ± 0.04
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 ± 0.012	0.449 ± 0.0016

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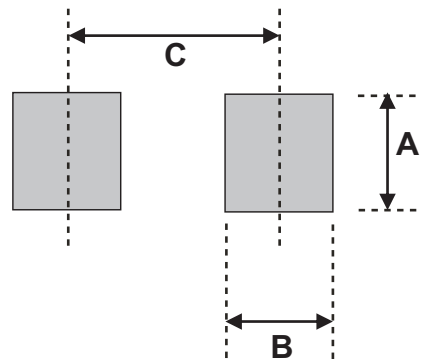
Marking Code

Park Number	Marking Code
CDBFN120-HF	12
CDBFN130-HF	13
CDBFN140-HF	14
CDBFN150-HF	15
CDBFN160-HF	16
CDBFN180-HF	18
CDBFN1100-HF	10



Suggested PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	1.500	0.059
B	1.000	0.039
C	1.300	0.051



Standard Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOD-323	3000	7