



# THE DATASHEET OF CDBFN140-G



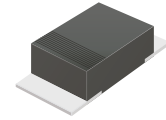
## CDBFN140-HF Thru CDBFN160-HF

Voltage: 40 to 60 Volts

Current: 1.0 Amp

RoHS Device

Halogen free

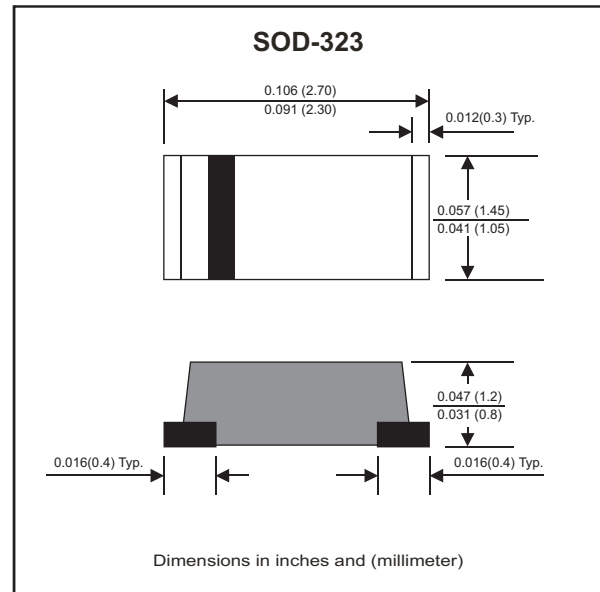


### Features

- 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.
- Guard ring 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 grams(approx.).



### Circuit Diagram



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

Parameter	Symbol	CDBFN 140-HF	CDBFN 160-HF	Unit
Repetitive peak reverse voltage	$V_{RRM}$	40	60	V
Maximum RMS voltage	$V_{RMS}$	28	42	V
Continuous reverse voltage	$V_R$	40	60	V
Maximum forward voltage @ $I_F=1.0A$	$V_F$	0.55	0.70	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
Maximum Reverse current	$I_R$	$V_R=V_{RRM}$ @ $T_J=25^\circ C$	0.5	mA
		$V_R=V_{RRM}$ @ $T_J=100^\circ C$	10	
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.

Company reserves the right to improve product design , functions and reliability without notice.

REV:D

## Ratings and Characteristic Curves(CDBFN140-HF Thru CDBFN160-HF)

Fig.1- Typical Forward Current Derating Curve

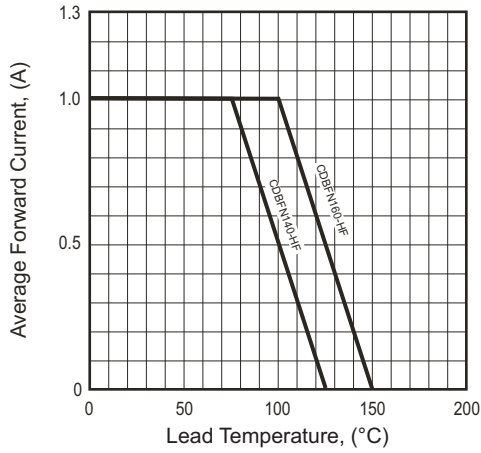


Fig.2- Typical Forward Characteristics

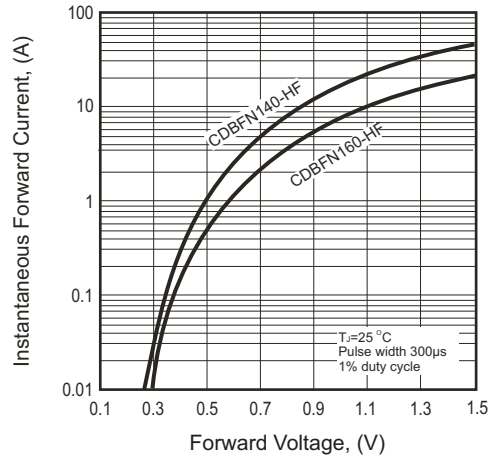


Fig.3 - Maximum Non-repetitive Forward Surge Current

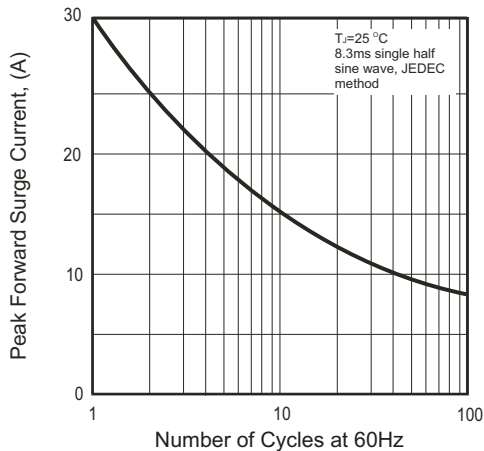


Fig.4 - Typical Junction Capacitance

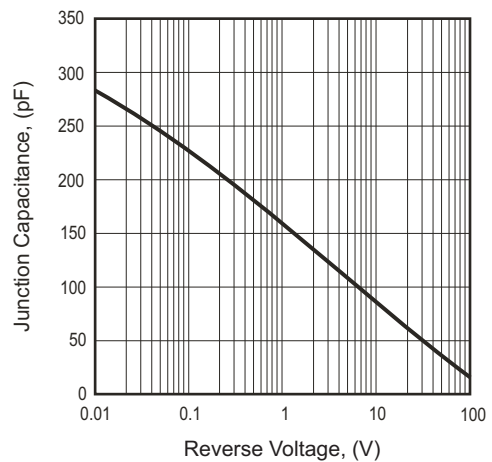
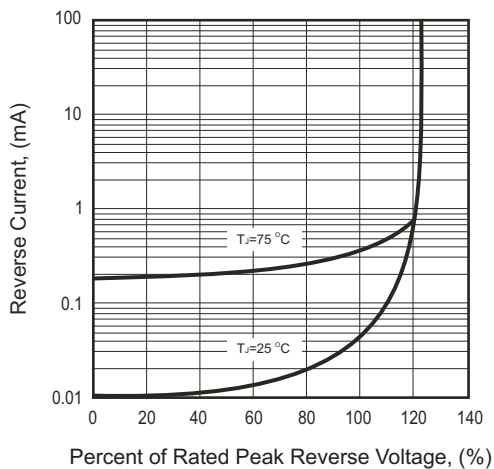
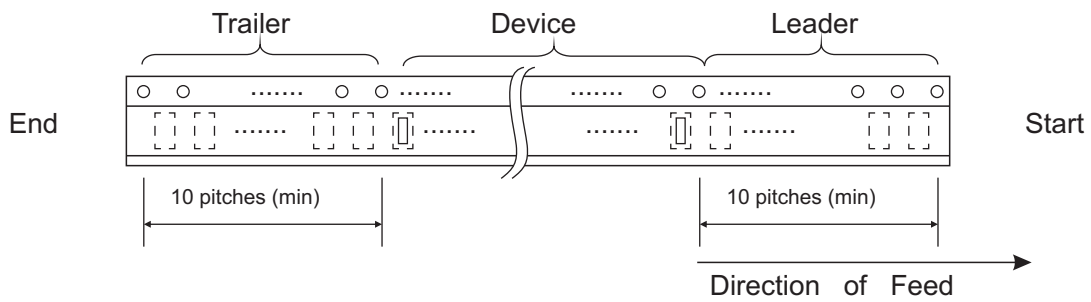
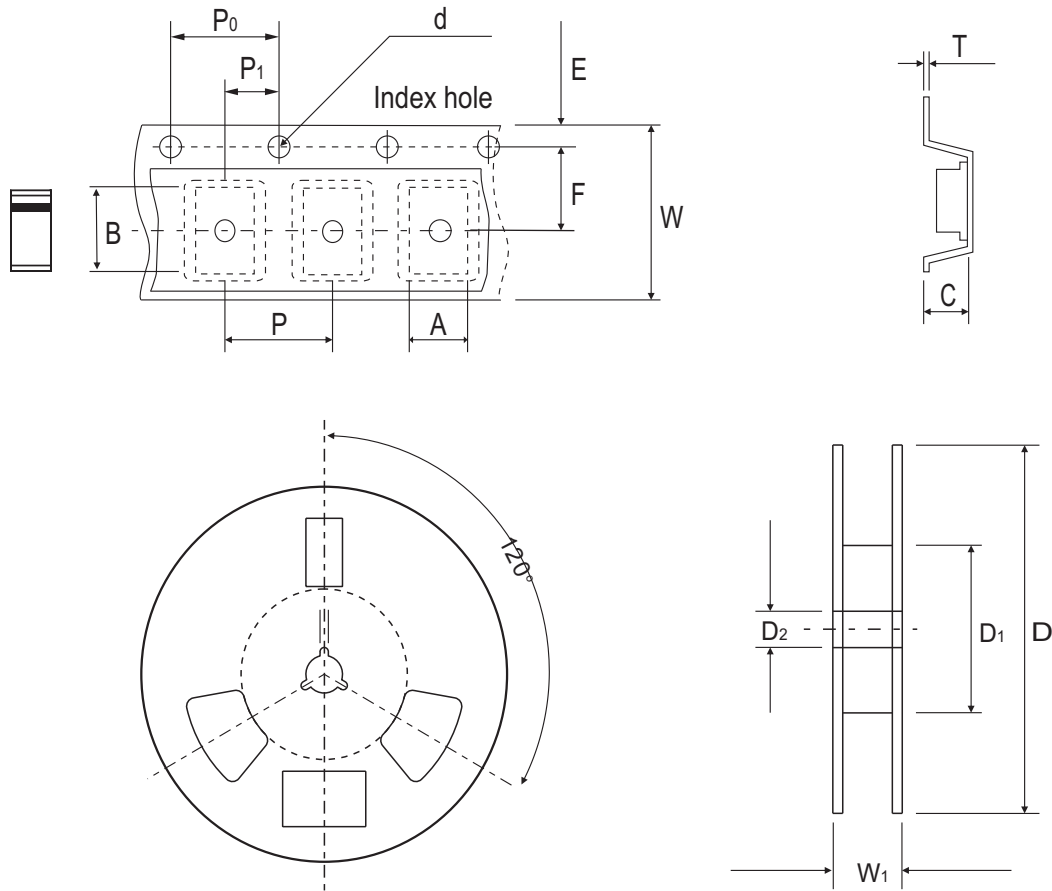


Fig.5- Typical Reverse Characteristics



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## 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 ± 2	62.0 MIN.	13.00 ± 0.50
	(inch)	0.058 ± 0.004	0.116 ± 0.004	0.045 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.441 MIN.	0.512 ± 0.020

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 ± 1.00
	(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 ± 0.039

## Marking Code

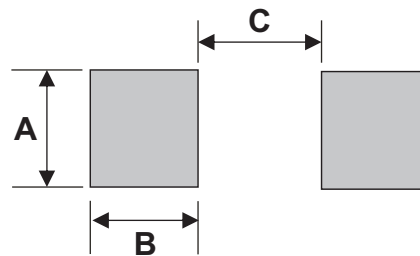
Part Number	Marking Code
CDBFN140-HF	14
CDBFN160-HF	16



XX=Product type marking code

## Suggested PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	1.50	0.059
B	1.00	0.039
C	1.30	0.051



## Standard Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOD-323	3,000	7

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