

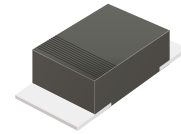
## CDBM140-HF Thru. CDBM1100-HF

Reverse Voltage: 40 to 100 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

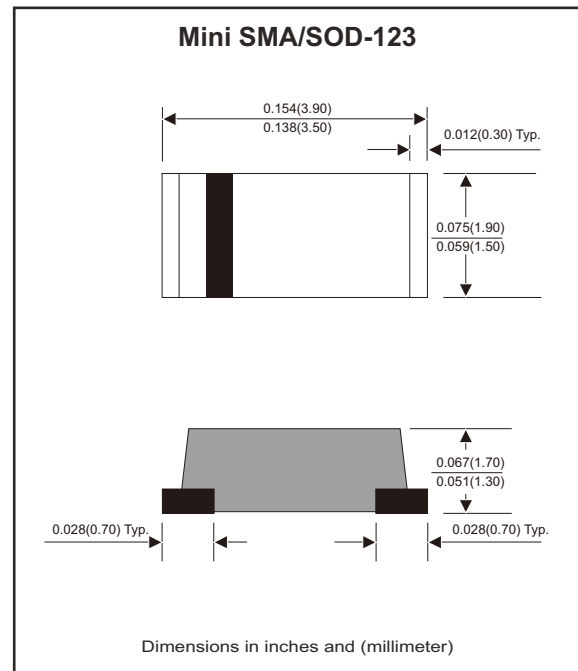


### Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Tiny plastic SMD package.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for over voltage protection.
- 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: Molded plastic, JEDEC Mini SMA/SOD-123.
- Terminals: Solde plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.018 grams (approx.).



### Circuit Diagram



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

Parameter	Symbol	CDBM140-HF	CDBM1100-HF	Unit
Repetitive peak reverse voltage	$V_{RRM}$	40	100	V
Maximum RMS voltage	$V_{RMS}$	28	70	V
Continuous reverse voltage	$V_R$	40	100	V
Maximum forward voltage @ $I_F=1.0A$	$V_F$	0.50	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 $V_R=V_{RRM}$ @ $T_A=25^\circ C$ @ $T_A=100^\circ C$	$I_R$	0.5 10		mA
Typ. diode junction capacitance (Note 1)	$C_J$	120		pF
Operating junction temperature range	$T_J$	-55 to +125	-55 to +150	°C
Storage temperature range	$T_{STG}$	-65 to +175		°C

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

## Rating and Characteristic Curves (CDBM140-HF Thru. CDBM1100-HF)

Fig.1- Current Derating Curve

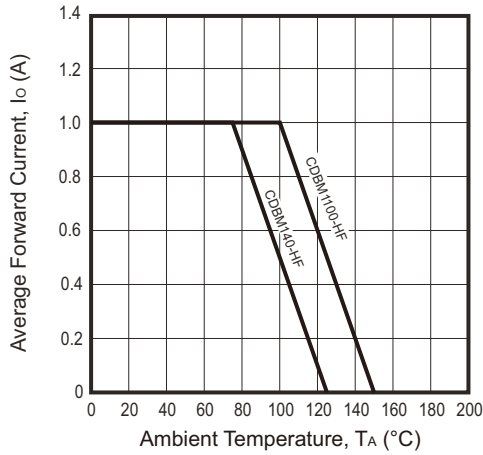


Fig.2 - Forward Characteristics

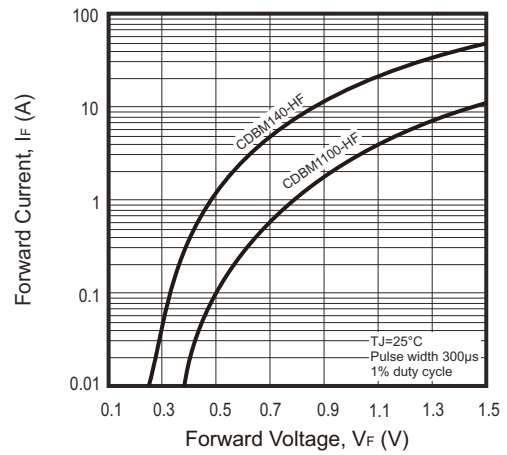


Fig.3 - Non-Repetitive Forward Surge Current

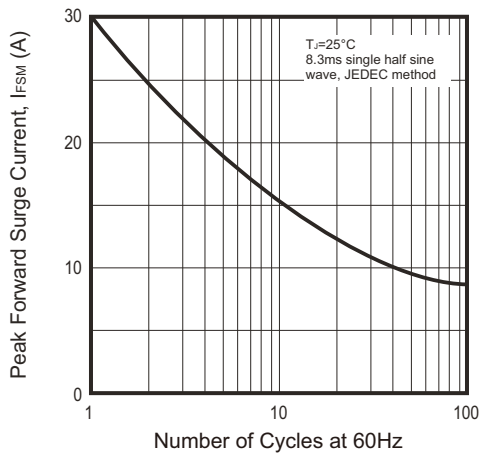


Fig.4 - Junction Capacitance

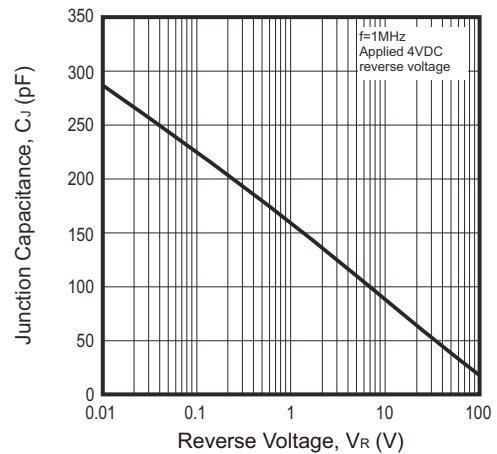
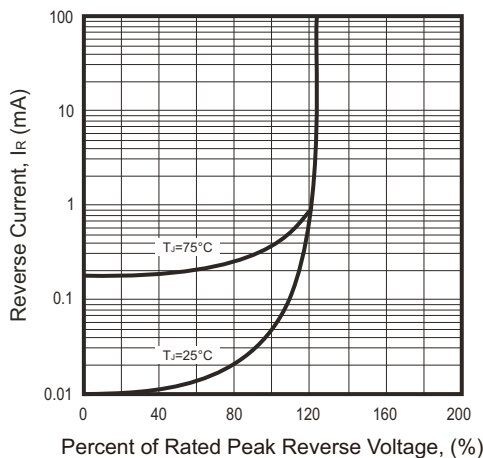
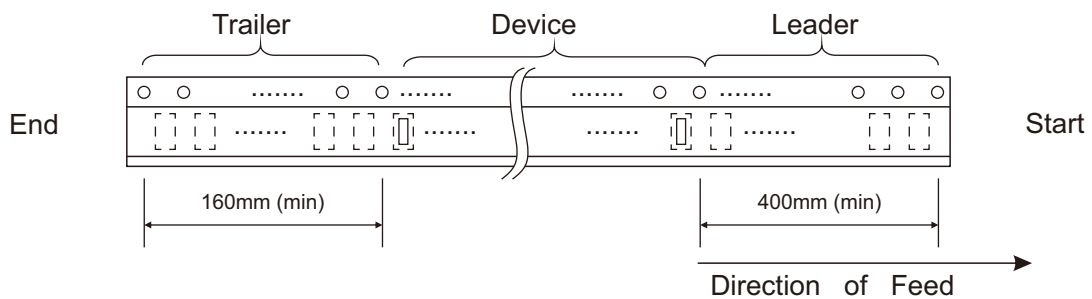
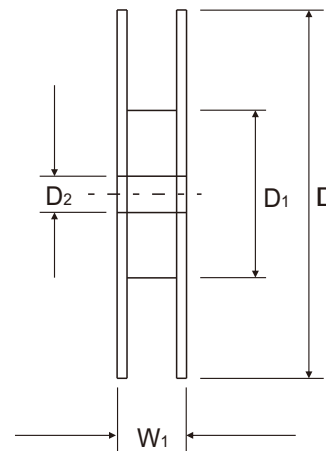
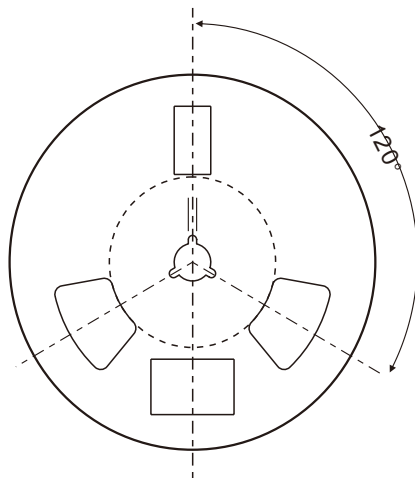
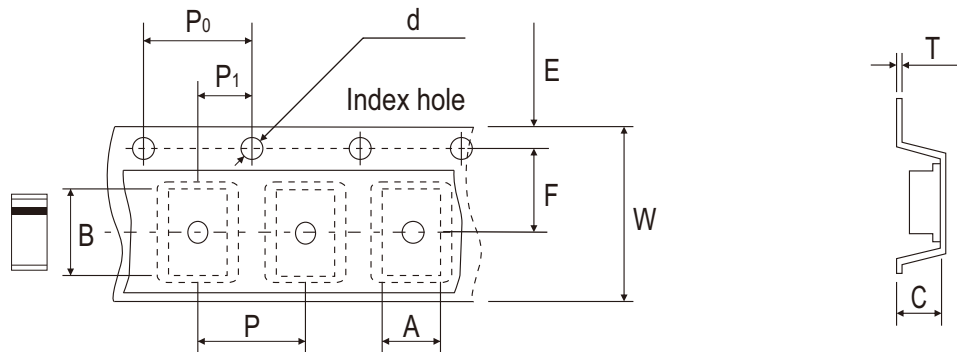


Fig.5 - Reverse Characteristics



## Reel Taping Specification



Mini-SMA /SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.153 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

Mini-SMA /SOD-123	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	14.4 ± 0.10
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.315 ± 0.011	0.567 ± 0.004

## Marking Code

Part Number	Marking Code
CDBM140-HF	14
CDBM1100-HF	10

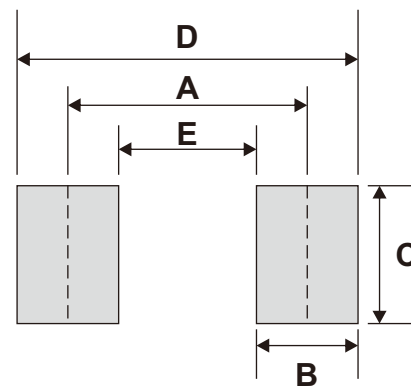


xx = Product type marking code

█ = Cathode band

## Suggested P.C.B. PAD Layout

SIZE	Mini-SMA/SOD-123	
	(mm)	(inch)
A	3.30	0.130
B	1.40	0.055
C	1.90	0.075
D	4.70	0.185
E	1.90	0.075



Note: 1. The pad layout is for reference purpose only.

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
Mini-SMA /SOD-123	2,500	7