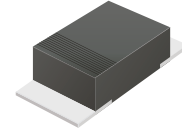


## CDBM120-G Thru. CDBM1150-G

Reverse Voltage: 20 to 150 Volts

Forward Current: 1.0 Amp

RoHS Device

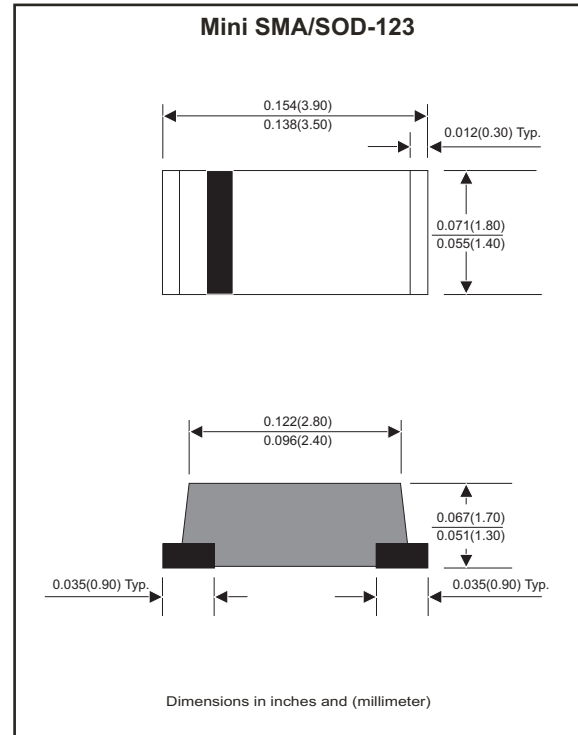


### Features

- 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 overvoltage 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: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.027 gram (approx.).



### Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	CDBM 120-G	CDBM 130-G	CDBM 140-G	CDBM 150-G	CDBM 160-G	CDBM 180-G	CDBM 1100-G	CDBM 1150-G	Unit	
Repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	V	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	V	
Continuous reverse voltage	$V_R$	20	30	40	50	60	80	100	150	V	
Maximum forward voltage @ $I_F=1.0\text{A}$	$V_F$	0.50			0.70		0.85		0.92	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 $V_R=V_{RRM}$ @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	0.5				10					mA
Typ. thermal resistance, junction to ambient air	$R_{\theta JA}$	98									$^\circ\text{C/W}$
Typ. diode junction capacitance (Note 1)	$C_J$	120									pF
Operating junction temperature	$T_J$	-55 to +125				-55 to +150					$^\circ\text{C}$
Storage temperature	$T_{STG}$	-65 to +175									$^\circ\text{C}$

Note 1:  $f=1\text{MHz}$  and applied 4V DC reverse voltage.

## Rating and Characteristic Curves (CDBM120-G Thru. CDBM1150-G)

Fig.1 Reverse Characteristics

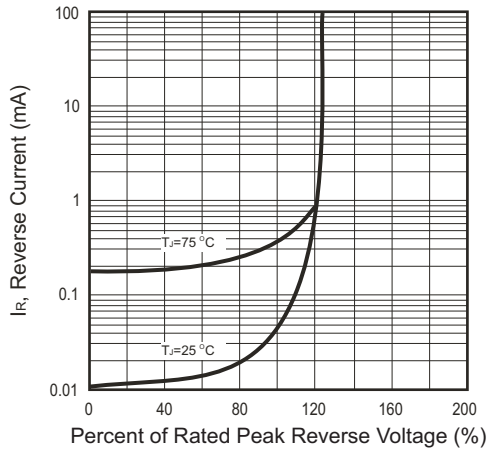


Fig.2 Forward Characteristics

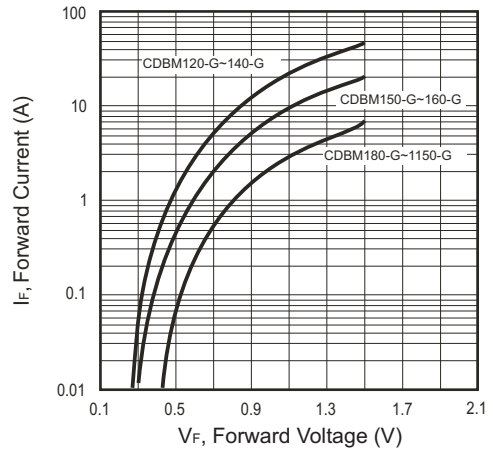


Fig.3 Junction Capacitance

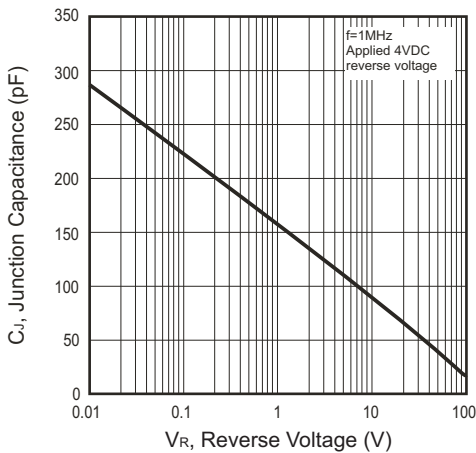


Fig.4 Current Derating Curve

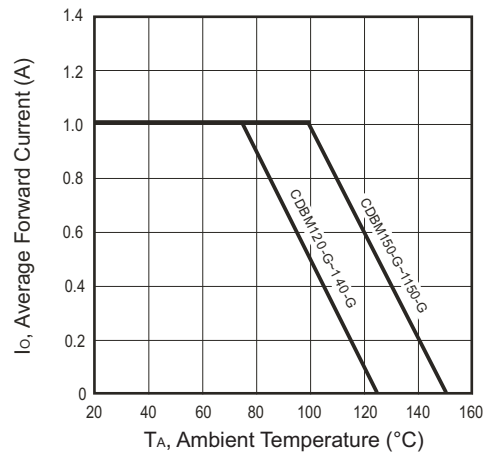
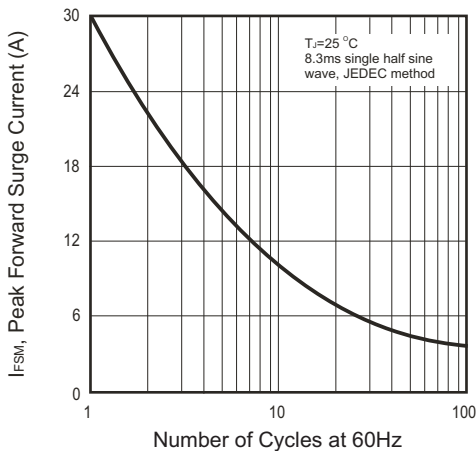
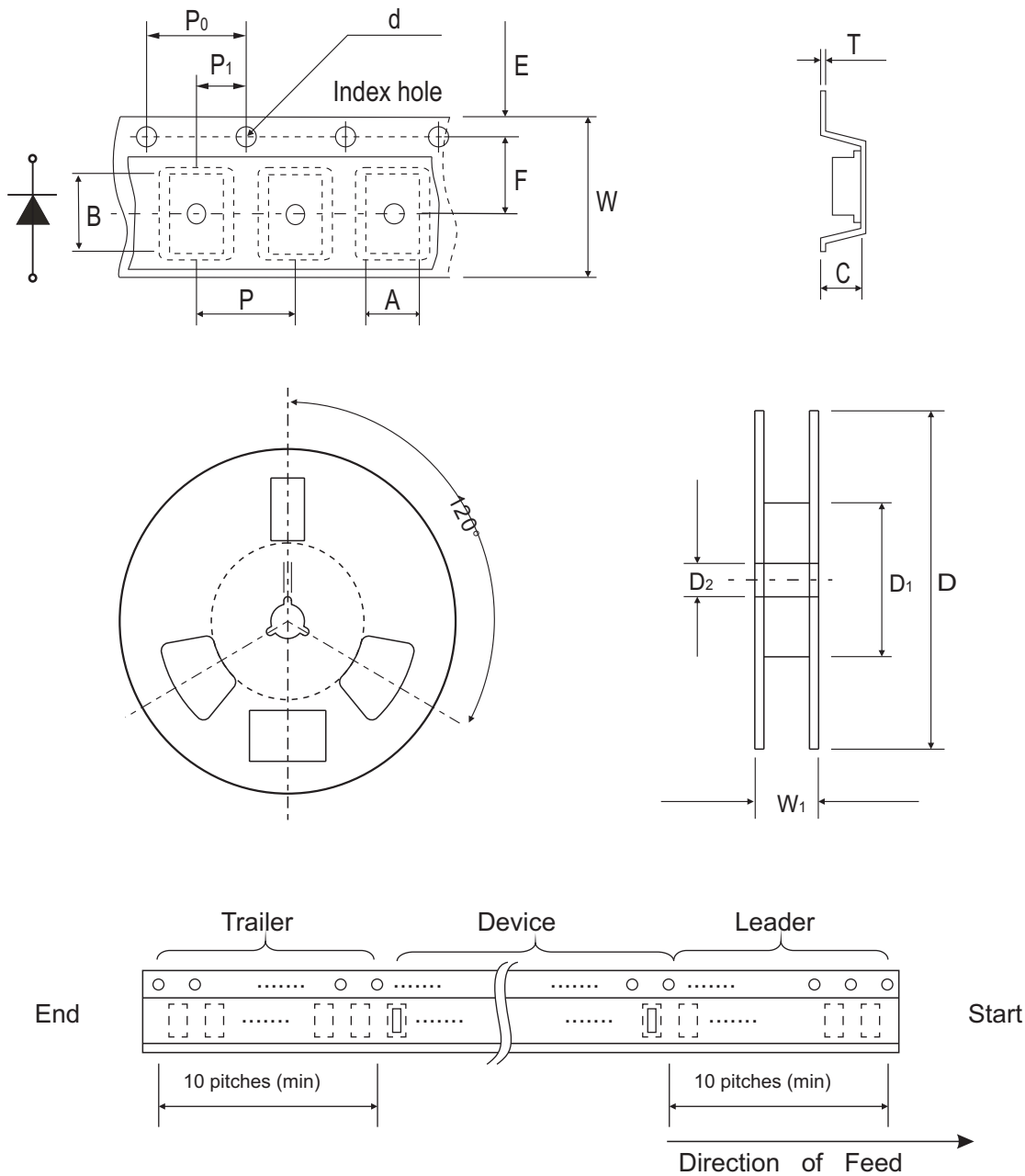


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification

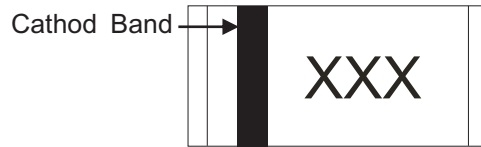


Mini-SMA/SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.153 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

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)	0.689 ± 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

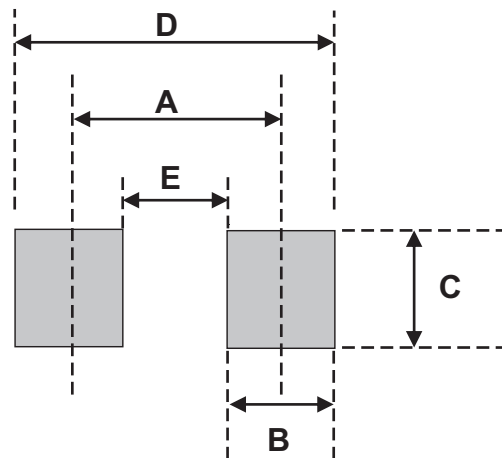
Park Number	Marking Code
CDBM120-G	12
CDBM130-G	13
CDBM140-G	14
CDBM150-G	15
CDBM160-G	16
CDBM180-G	18
CDBM1100-G	10
CDBM1150-G	115



xxx = Product type marking code

## Suggested 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	5.70	0.225
E	1.90	0.075



## Standard Packaging

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