



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## CDBF0540-HF

$I_o = 500 \text{ mA}$   
 $V_R = 40 \text{ Volts}$   
 RoHS Device  
 Halogen Free

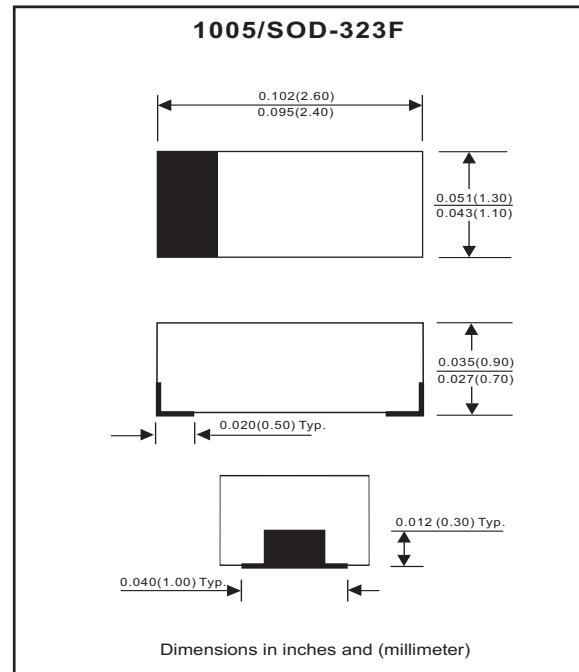


### Features

- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

### Mechanical data

- Case: 1005/SOD-323F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: cathode band & BN
- Mounting position: Any
- Weight: 0.006 gram(approx.).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse voltage		$V_{RM}$			40	V
Reverse voltage		$V_R$			40	V
Average forward rectified current		$I_o$			500	mA
Forward current, surge peak	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			5.5	A
Storage temperature		$T_{STG}$	-40		+125	°C
Junction temperature		$T_j$			+125	°C

### Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 0.5 \text{ A} @ T_a = 25 \text{ }^\circ\text{C}$ $I_F = 1 \text{ A} @ T_a = 25 \text{ }^\circ\text{C}$ $I_F = 0.5 \text{ A} @ T_a = 100 \text{ }^\circ\text{C}$ $I_F = 1 \text{ A} @ T_a = 100 \text{ }^\circ\text{C}$	$V_F$			0.51 0.64 0.46 0.62	V
Reverse current	$V_R = 20 \text{ V} @ T_a = 25 \text{ }^\circ\text{C}$ $V_R = 40 \text{ V} @ T_a = 25 \text{ }^\circ\text{C}$ $V_R = 20 \text{ V} @ T_a = 100 \text{ }^\circ\text{C}$ $V_R = 40 \text{ V} @ T_a = 100 \text{ }^\circ\text{C}$	$I_R$			0.01 0.02 2 5	mA
Capacitance between terminals	f = 1 MHz, and 0 VDC reverse voltage	$C_T$			170	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA}$ , $I_{rr} \times I_R$ , $R_L = 100 \text{ ohm}$	$T_{rr}$		22		ns

## RATING AND CHARACTERISTIC CURVES (CDBF0540-HF)

Fig. 1 - Forward characteristics

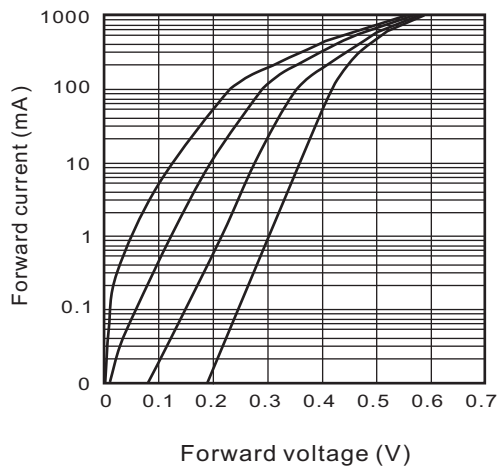


Fig. 2 - Reverse characteristics

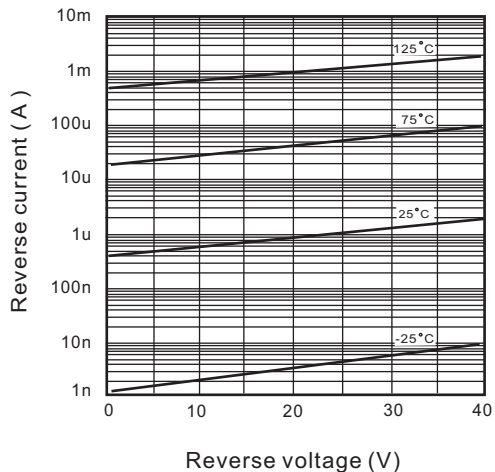


Fig. 3 - Capacitance between terminals characteristics

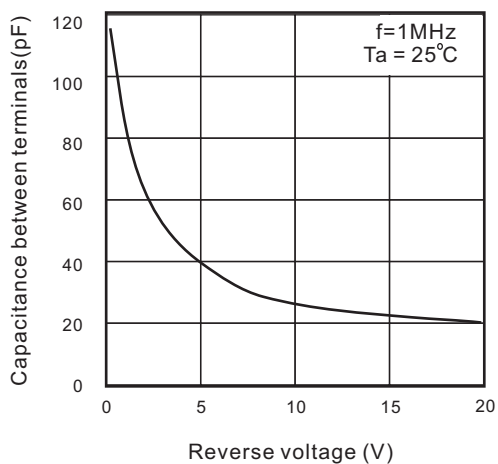
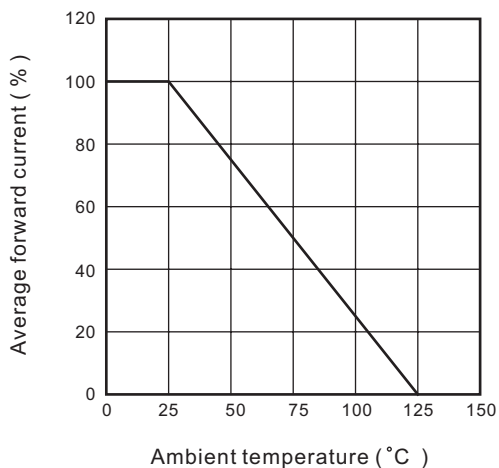
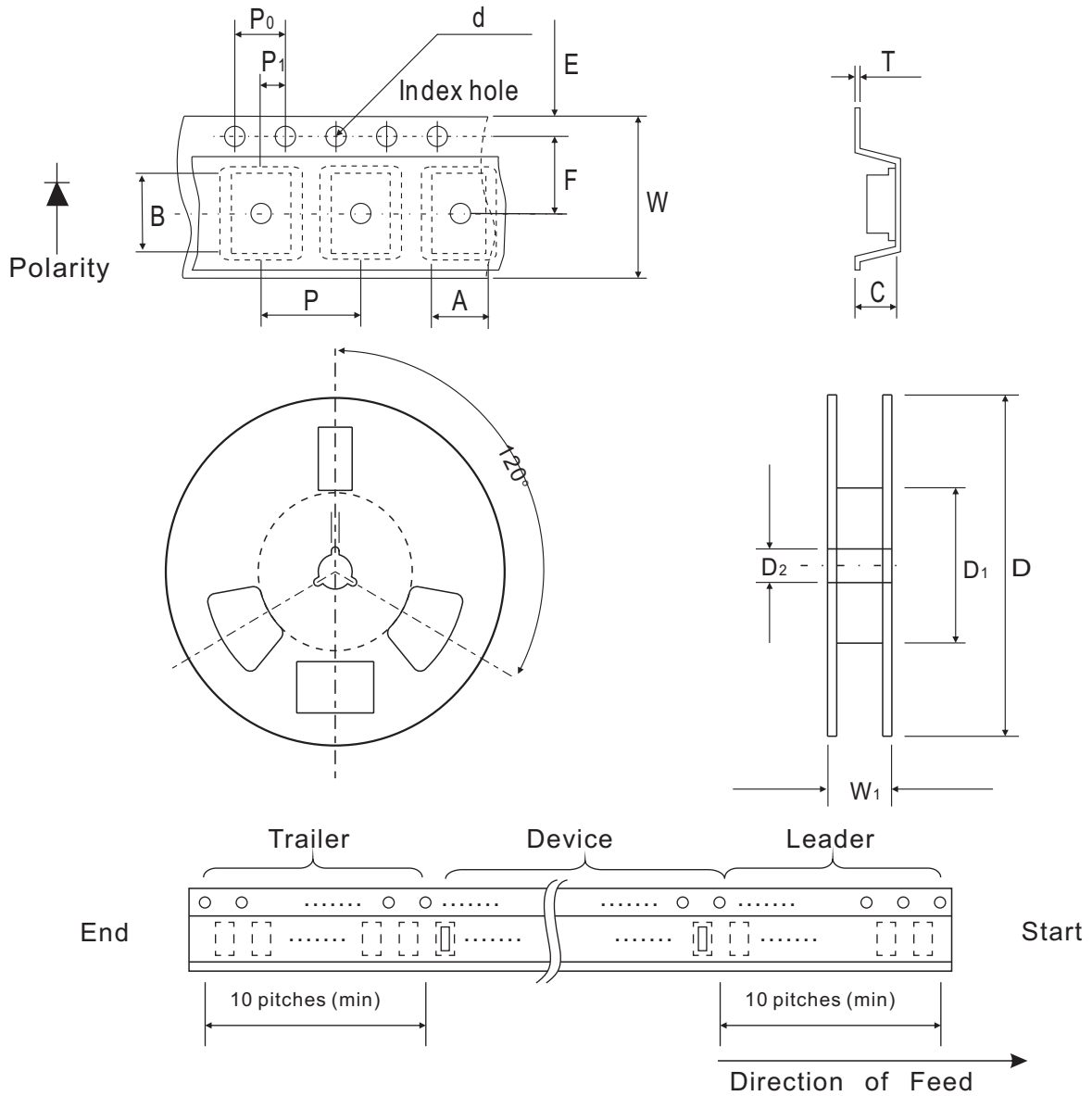


Fig. 4 - Current derating curve



## Reel Taping Specification



1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.55 ± 0.10	2.65 ± 0.10	1.05 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.061 ± 0.004	0.104 ± 0.004	0.041 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

1005 (SOD-323F)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

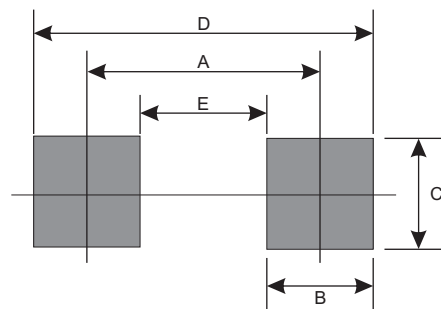
## Marking Code

Park Number	Marking Code
CDBF0540-HF	BN



## Suggested PAD Layout

SIZE	1005/SOD-323F	
	(mm)	(inch)
A	2.10	0.083
B	1.20	0.047
C	1.20	0.047
D	3.30	0.130
E	0.90	0.035



## Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
1005/SOD-323F	4000	7