

# SMD Schottky Barrier Diode



SMD Diodes Specialist

## CDBF0320/0330/0340-HF (RoHS Device)

$I_O = 350 \text{ mA}$

$V_R = 20 \text{ to } 40 \text{ Volts}$

### Features

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

### Mechanical data

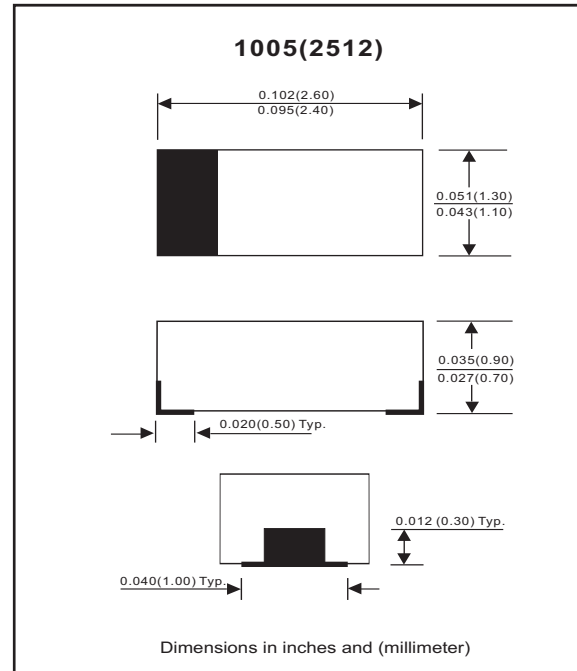
- Case: 1005(2512) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.

Marking code:

- CDBF0320-HF : BH
- CDBF0330-HF : BJ
- CDBF0340-HF : BK

Mounting position: Any

Weight: 0.006 gram(approx.).



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

Parameter	Symbol	CDBF0320	CDBF0330	CDBF0340	Unit
Repetitive Peak reverse voltage Reverse voltage	$V_{RRM}$ $V_R$	20	30	40	V
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average forward rectified current	$I_O$	350			mA
Forward current, surge peak 8.3 ms single half sine-wave	$I_{FSM}$	1.5			A
Power dissipation	$P_D$	200			mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	500			$^\circ\text{C}/\text{W}$
Storage temperature	$T_{STG}$	-65 TO +125			$^\circ\text{C}$
Junction temperature	$T_j$	+125			$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse current CDBF0320-HF CDBF0330-HF CDBF0340-HF	$V_R = 10\text{V}$ $V_R = 20\text{V}$ $V_R = 30\text{V}$	$I_R$			5 5 5	$\mu\text{A}$
Forward voltage	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$	$V_F$			0.37 0.60	V
Capacitance between terminals	$f = 1 \text{ MHz}$ , and 0 VDC reverse voltage	$C_T$		50		pF
Reverse recovery time	$I_F=I_R=10\text{mA}$ , $I_{rr}=0.1 \times I_R$ , $R_L=100 \text{ ohm}$	$T_{rr}$		6.4		nS

## RATING AND CHARACTERISTIC CURVES (CDBF0320/0330/0340-HF)

Fig. 1 - Forward characteristics

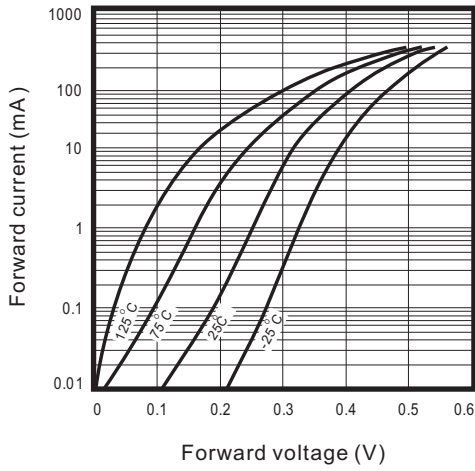


Fig. 2 - Reverse characteristics

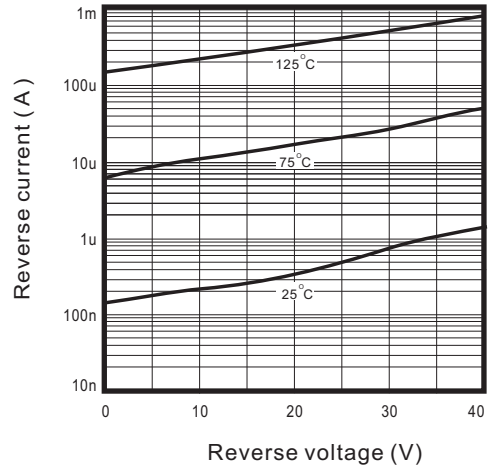


Fig.3 - Capacitance between terminals characteristics

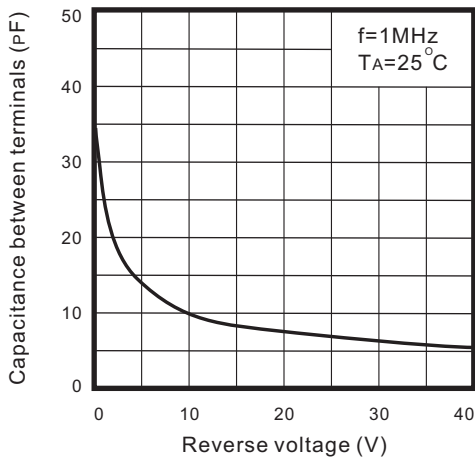
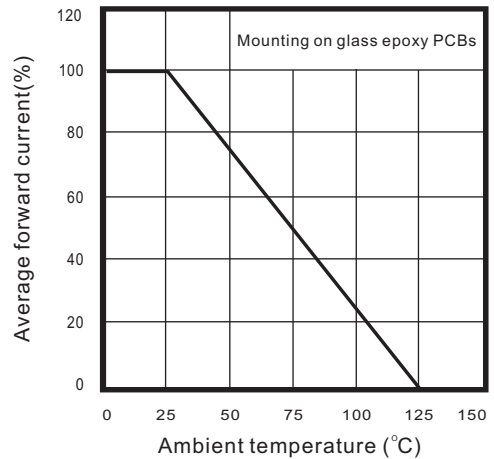
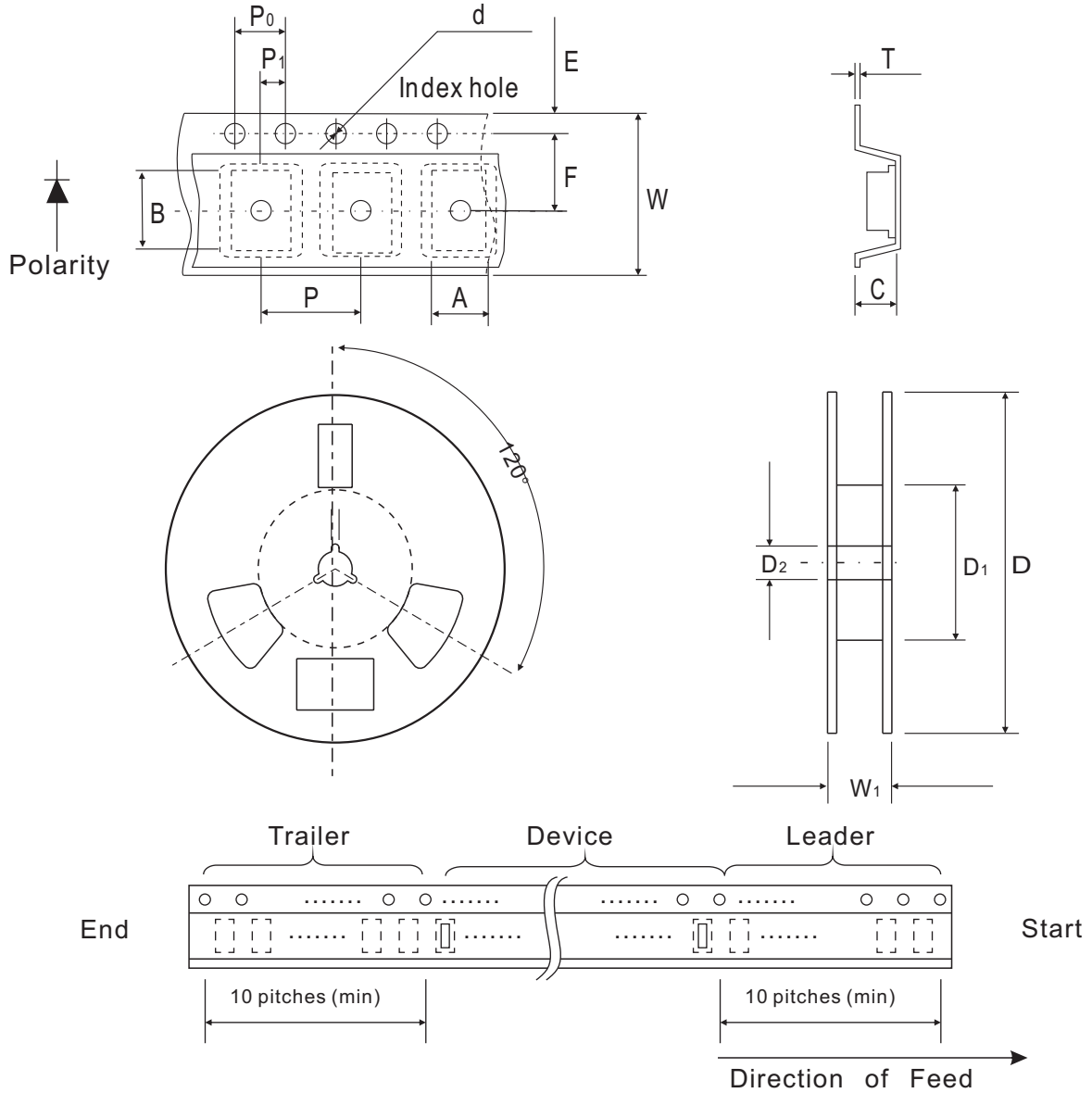


Fig.4 - Current derating curve



## Reel Taping Specification



F/1005	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

F/1005	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

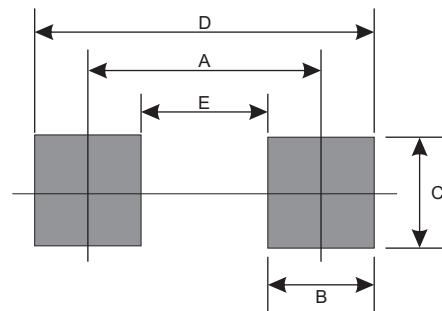
Park Number	Marking Code
CDBF0320-HF	BH
CDBF0330-HF	BJ
CDBF0340-HF	BK



xx = Product type marking code

## Suggested PAD Layout

SIZE	F/1005	
	(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)
F/1005	4000	7