

# SMD Schottky Barrier Diode

## CDBU0320/0330/0340-HF

$I_o = 350 \text{ mA}$

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

RoHS Device

Halogen Free

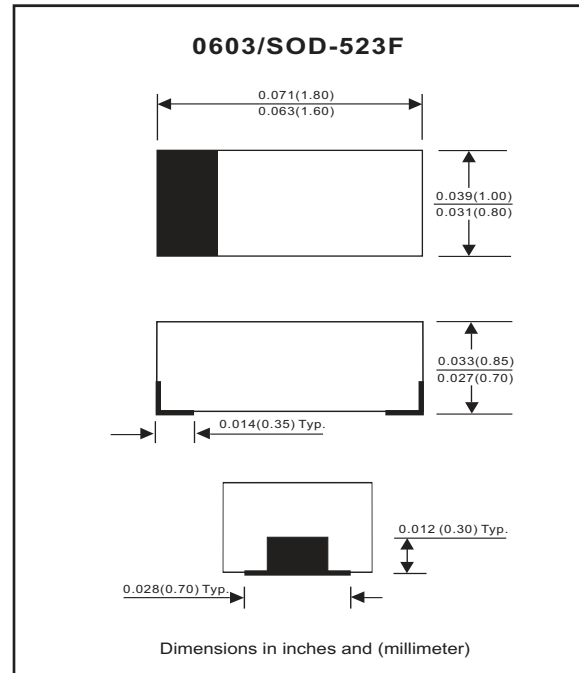


### Features

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

### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code:  
CDBU0320-HF : BH  
CDBU0330-HF : BJ  
CDBU0340-HF : BK
- Mounting position: Any
- Weight: 0.003 gram(approx.).



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

Parameter	Symbol	CDBU0320-HF	CDBU0330-HF	CDBU0340-HF	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	$P_D$	150			mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	667			$^\circ\text{C}/\text{W}$
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 CDBU0320-HF CDBU0330-HF CDBU0340-HF	$V_R = 20\text{V}$ $V_R = 30\text{V}$ $V_R = 40\text{V}$	$I_R$			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 (CDBU0320/0330/0340-HF)

Fig. 1 - Forward characteristics

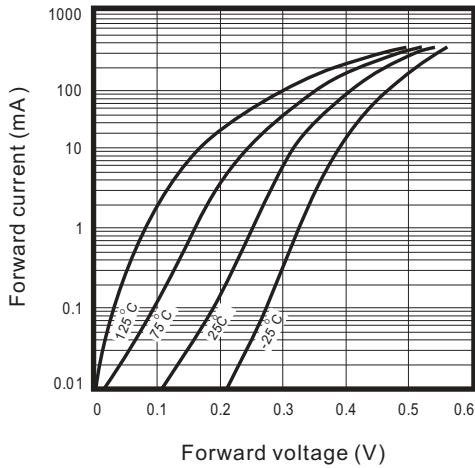


Fig. 2 - Reverse characteristics

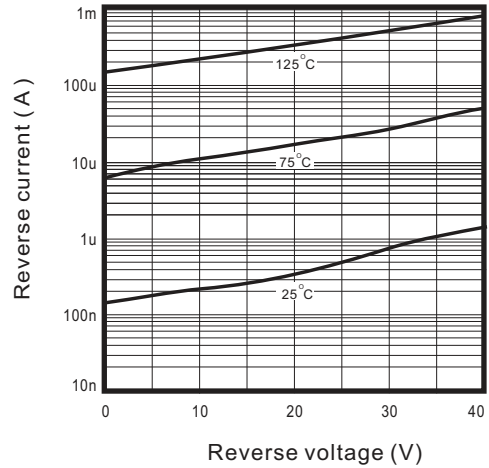


Fig.3 - Capacitance between terminals characteristics

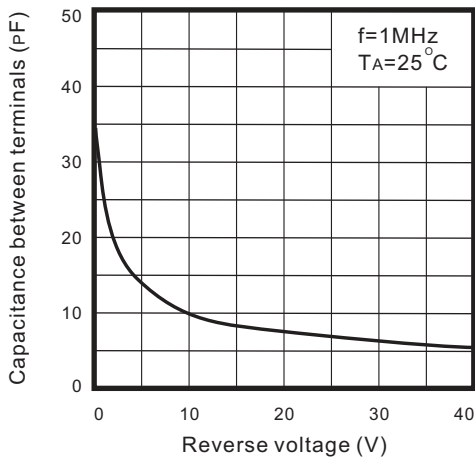
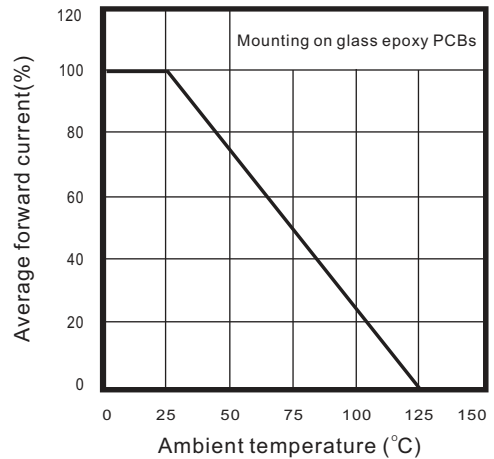
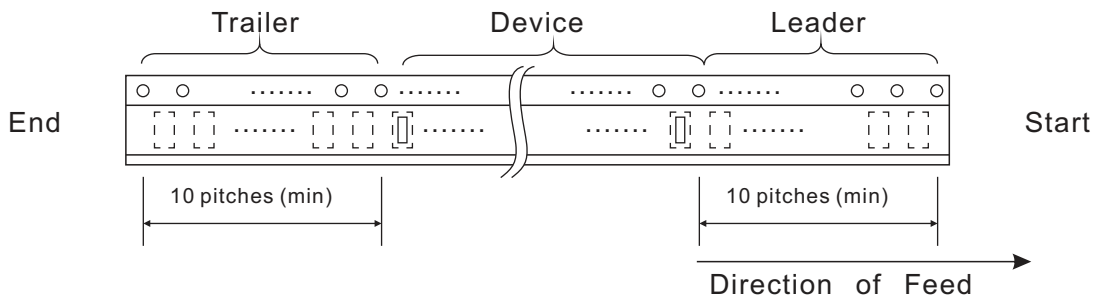
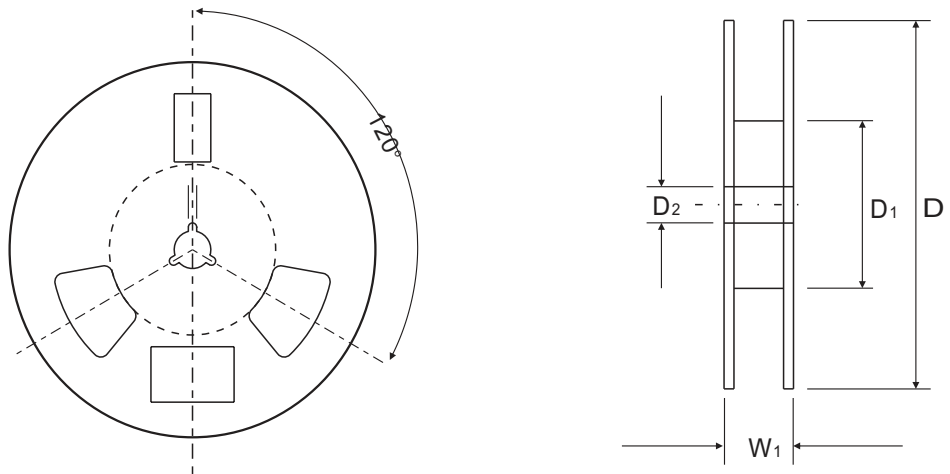
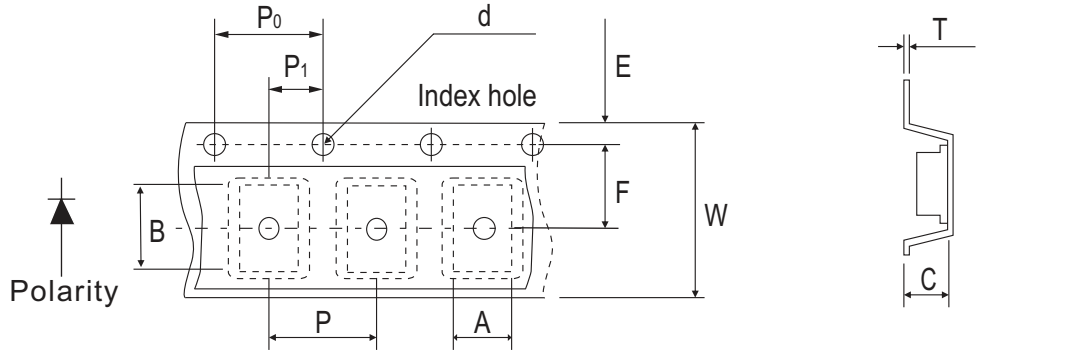


Fig.4 - Current derating curve



## Reel Taping Specification



0603 (SOD-523F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039 ± 0.004	0.073 ± 0.004	0.039 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0603 (SOD-523F)	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

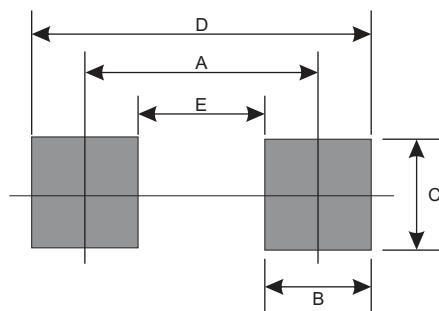
Part Number	Marking Code
CDBU0320-HF	BH
CDBU0330-HF	BJ
CDBU0340-HF	BK



xx = Product type marking code

## Suggested PAD Layout

SIZE	0603/SOD-523F	
	(mm)	(inch)
A	1.70	0.067
B	0.60	0.024
C	0.80	0.031
D	2.30	0.091
E	1.10	0.043



## Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
0603/SOD-523F	4000	7