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## SMD Schottky Barrier Diode



# CDBU0145-HF

**$I_o = 100\text{ mA}$**   
 **$V_R = 45\text{ Volts}$**   
**RoHS Device**  
**Halogen Free**



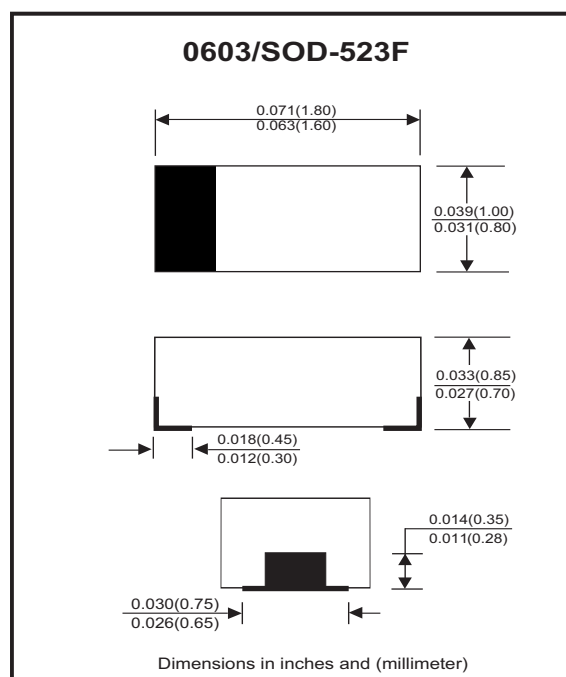
### Features

- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Low leakage current. ( $I_R=0.1\mu\text{A typ.}@V_R=10\text{V}$ )
- Majority carrier conduction.

### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.003 grams (approx.).

### Circuit Diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		$V_{RRM}$			50	V
Reverse voltage		$V_R$			45	V
Average forward current		$I_o$			100	mA
Forward current, surge peak	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$		1		A
Power dissipation		$P_D$			250	mW
Junction temperature		$T_j$			+125	$^\circ\text{C}$
Storage temperature		$T_{STG}$	-40		+125	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100\text{ mA DC}$	$V_F$			0.55	V
Reverse current	$V_R = 10\text{V}$	$I_R$			1	$\mu\text{A}$
Capacitance between terminals	$F = 1\text{ MHz}$ and $10\text{ VDC}$ reverse voltage	$C_T$		9		pF

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## RATING AND CHARACTERISTIC CURVES (CDBU0145-HF)

Fig. 1 - Forward characteristics

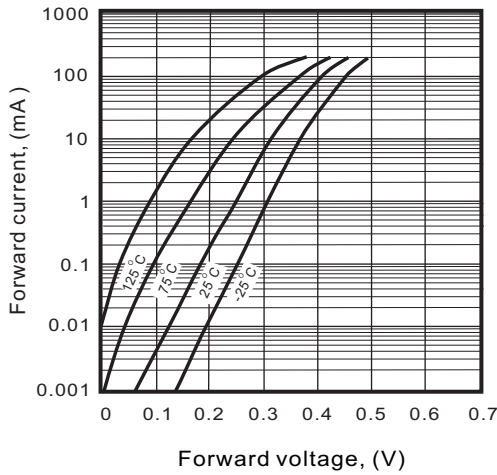


Fig. 2 - Reverse characteristics

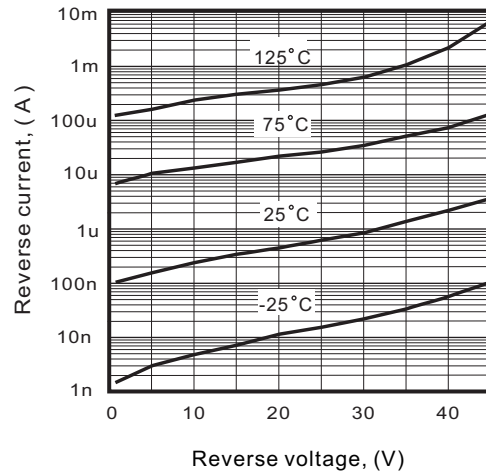


Fig. 3 - Capacitance between terminals characteristics

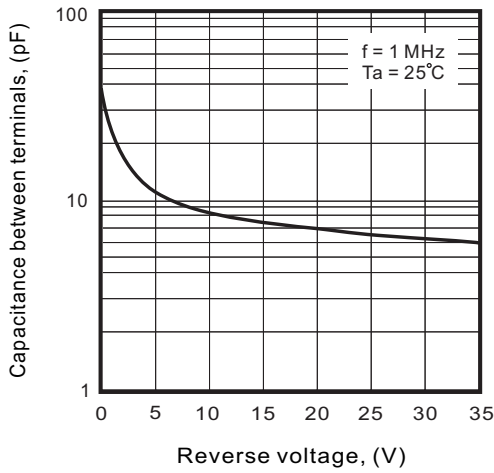
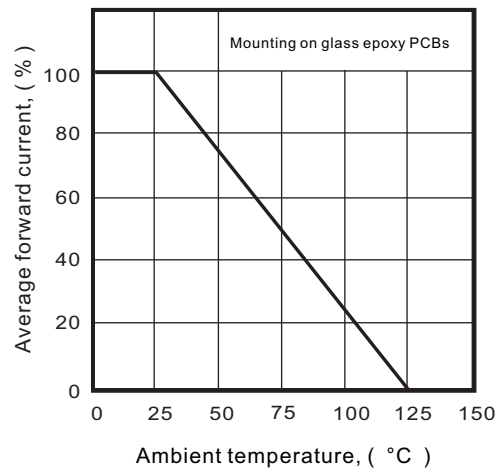


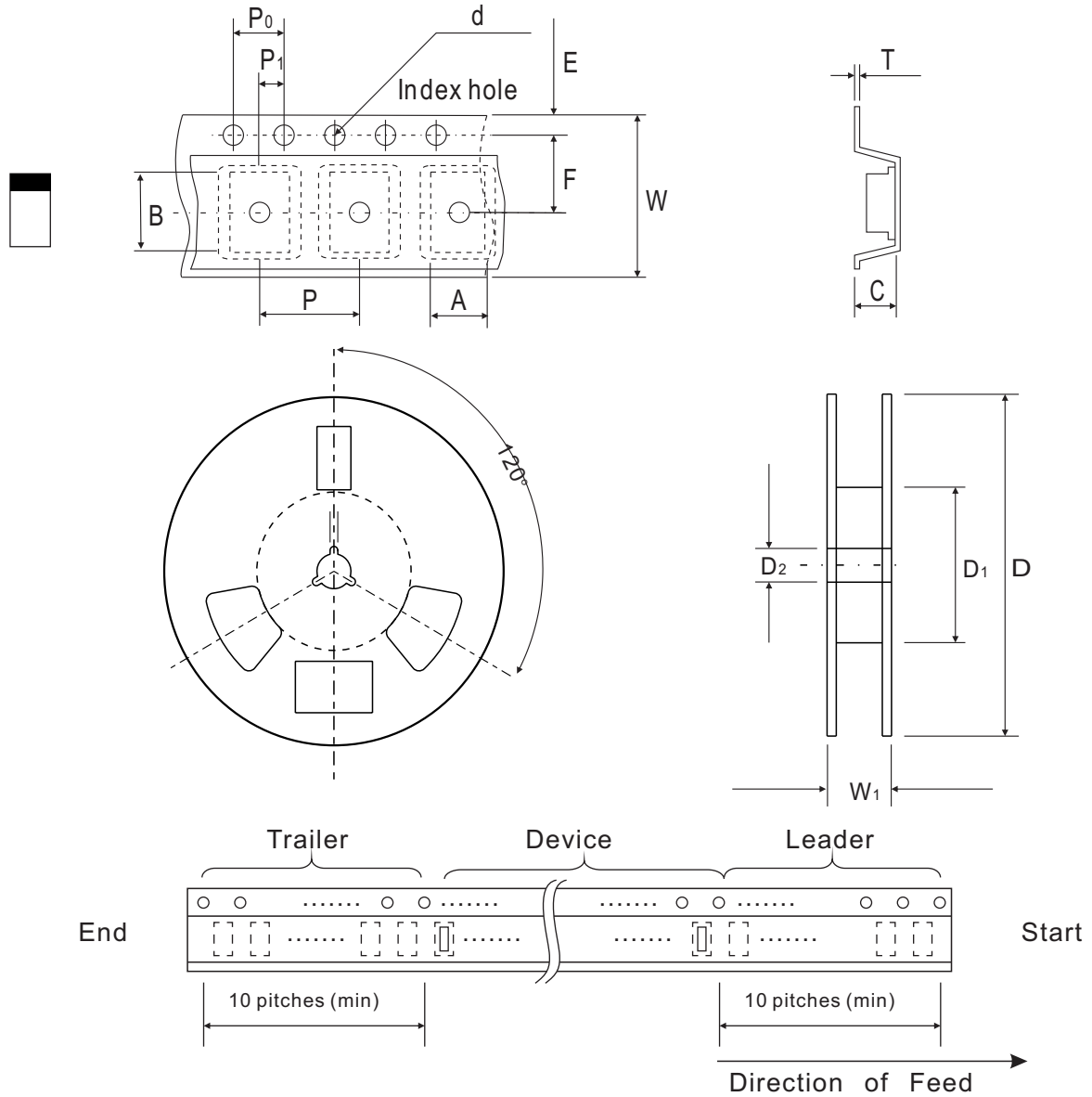
Fig. 4 - Current derating curve



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## Reel Taping Specification



0603 (SOD-523F)	SYMBOL	<b>A</b>	<b>B</b>	<b>C</b>	<b>d</b>	<b>D</b>	<b>D<sub>1</sub></b>	<b>D<sub>2</sub></b>
	(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	<b>E</b>	<b>F</b>	<b>P</b>	<b>P<sub>0</sub></b>	<b>P<sub>1</sub></b>	<b>T</b>	<b>W</b>	<b>W<sub>1</sub></b>
	(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.

# SMD Schottky Barrier Diode



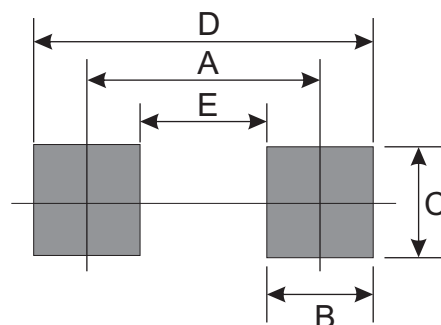
## Marking Code

Part Number	Marking Code
CDBU0145-HF	B4



## 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 Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
0603/SOD-523F	4,000	7