

# SMD Schottky Barrier Diode

## CDBQR0140R-HF

$I_o = 100 \text{ mA}$   
 $V_R = 40 \text{ Volts}$   
 RoHS Device  
 Halogen Free

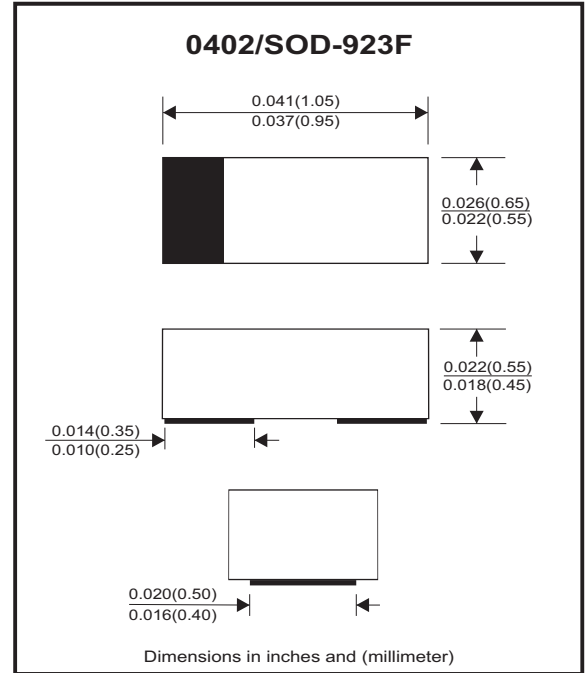


### Features

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

### Mechanical data

- Case: 0402 / SOD-923F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: cathode band & B9
- Mounting position: Any.
- Weight: 0.001 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		$V_{RRM}$			45	V
Reverse voltage		$V_R$			40	V
Average forward rectified 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		$P_D$			125	mW
Storage temperature range		$T_{STG}$	-40		+125	$^\circ\text{C}$
Operating temperature range		$T_j$	-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	$I_F = 10 \text{ mA}$	$V_F$			0.45	V
Reverse current	$V_R = 10 \text{ V}$	$I_R$			1	$\mu\text{A}$
Capacitance between terminals	$f = 1 \text{ MHz}$ , and 10 VDC reverse voltage	$C_T$		6		pF

## RATING AND CHARACTERISTIC CURVES (CDBQR0140R-HF)

Fig. 1 - Forward characteristics

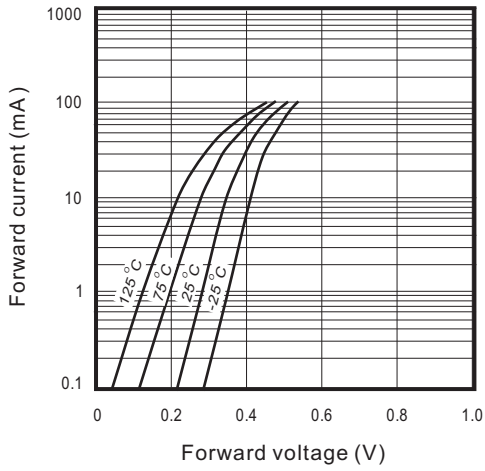


Fig. 2 - Reverse characteristics

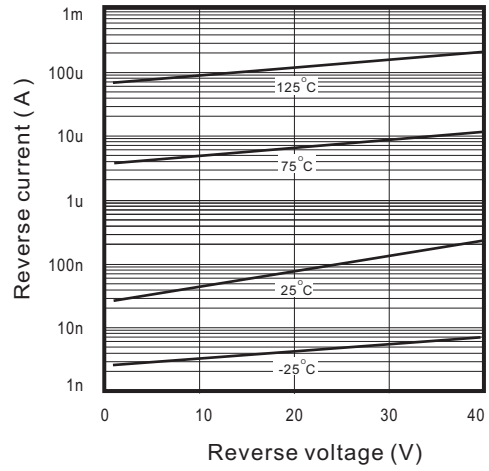


Fig. 3 - Capacitance between terminals characteristics

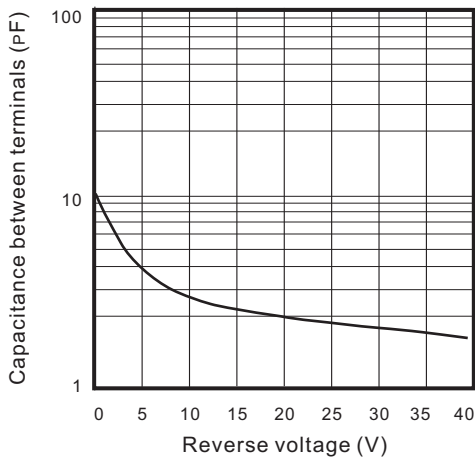
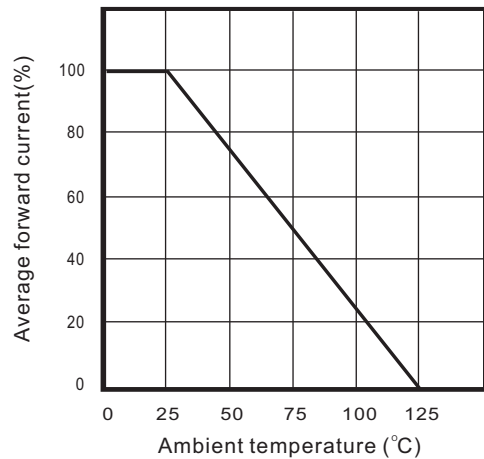
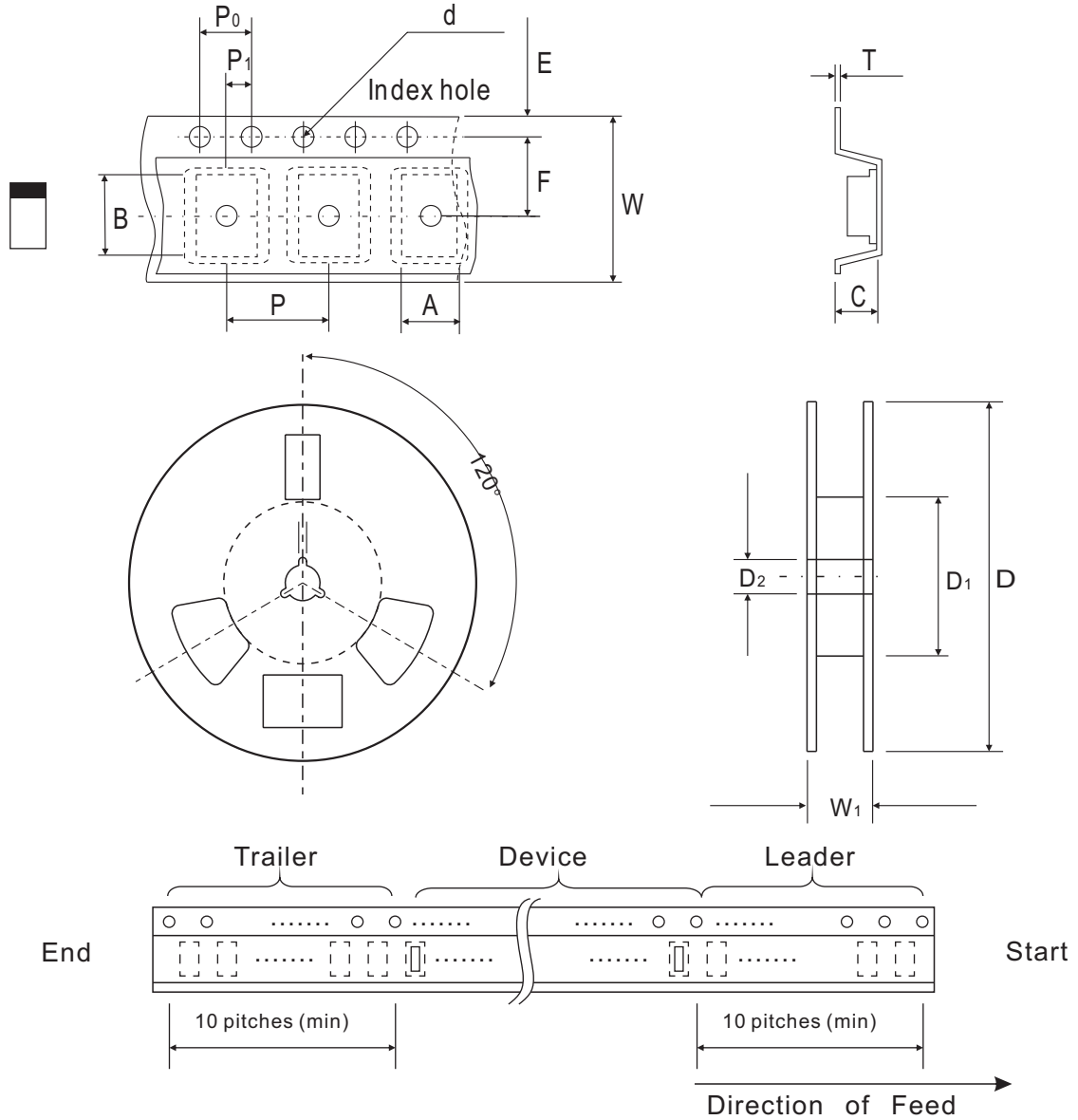


Fig. 4 - Current derating curve



## Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.026 ± 0.004	0.045 ± 0.004	0.024 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0402 (SOD-923F)	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 ± 0.10	0.22 ± 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.

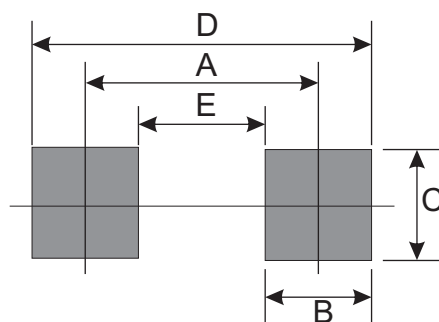
## Marking Code

Part Number	Marking Code
CDBQR0140R-HF	B9



## Suggested PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.750	0.030
B	0.500	0.020
C	0.700	0.028
D	1.250	0.049
E	0.250	0.010



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0402/SOD-923F	5,000	7

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