

SMD Schottky Barrier Diode

CDBQR40-HF

$I_o = 200 \text{ mA}$
 $V_R = 40 \text{ Volts}$
RoHS Device
Halogen Free



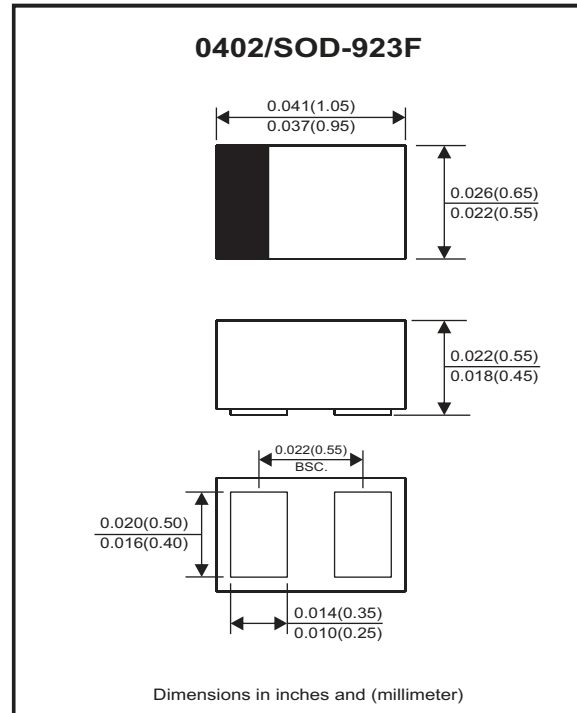
Features

- 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.
- 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
Peak reverse voltage		V_{RM}			40	V
Reverse voltage		V_R			40	V
RMS reverse voltage		$V_{R(RMS)}$			28	V
Average forward rectified current		I_o			200	mA
Peak forward surge current	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			0.6	A
Power dissipation		P_D			125	mW
Operating temperature range		T_j	-55		+125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-65		+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	$I_F = 1 \text{ mA}$ $I_F = 40 \text{ mA}$	V_F			0.38 1	V
Reverse current	$V_R = 30 \text{ V}$	I_R			0.2	μA
Capacitance between terminals	$f = 1 \text{ MHz}$, and 0 VDC reverse voltage	C_T			5	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}			5	nS

RATING AND CHARACTERISTIC CURVES (CDBQR40-HF)

Fig. 1 - Forward Characteristics

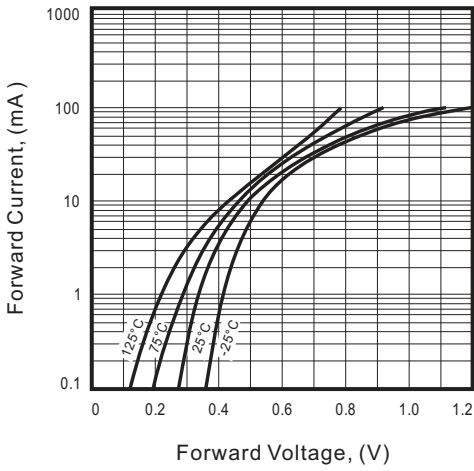


Fig. 2 - Reverse Characteristics

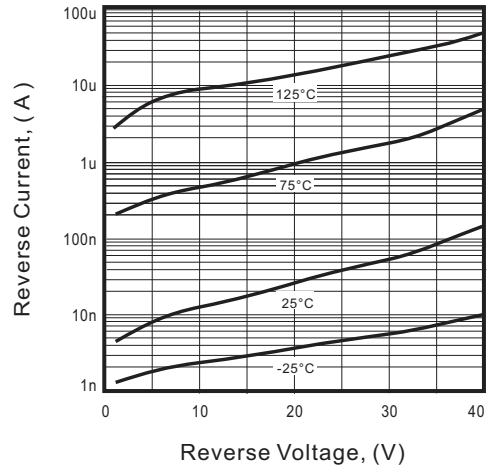


Fig.3 - Capacitance Between Terminals Characteristics

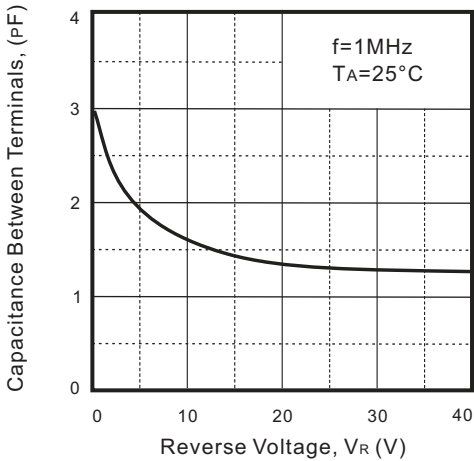
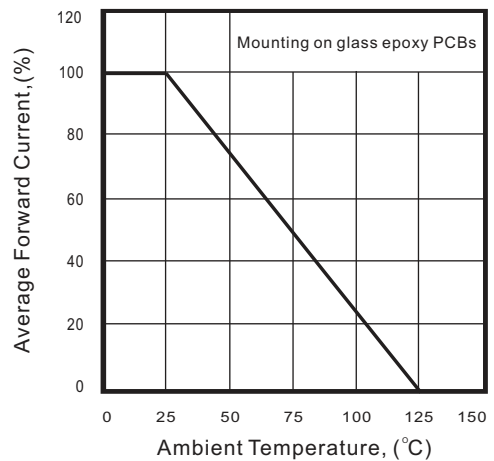
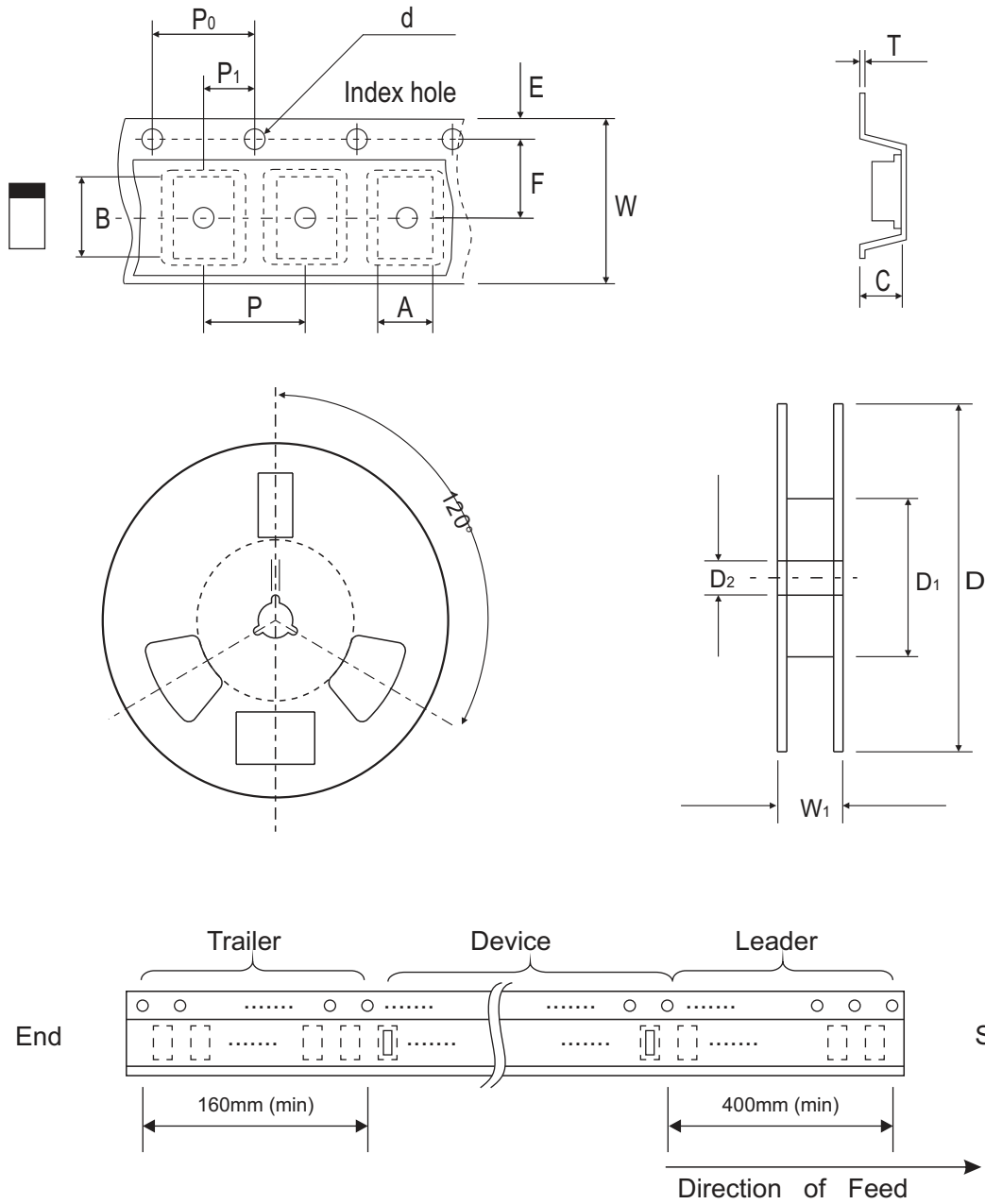


Fig.4 - Current Derating Curve



Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	$1.50 + 0.10 - 0$	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.030 ± 0.002	0.046 ± 0.002	0.026 ± 0.002	$0.059 + 0.004 - 0$	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0402 (SOD-923F)	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$0.20 + 0.02 - 0.05$	8.00 ± 0.20	$12.00 + 0.50 - 0$
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.008 + 0.001 - 0.002$	0.315 ± 0.008	$0.472 + 0.020 - 0$

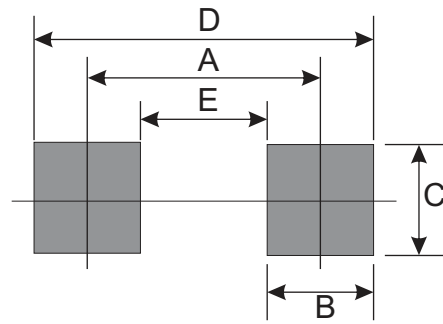
Marking Code

Part Number	Marking Code
CDBQR40-HF	BC



Suggested PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.75	0.030
B	0.50	0.020
C	0.70	0.028
D	1.25	0.049
E	0.25	0.010



Standard Packaging

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