

CDBQC0530L-HF

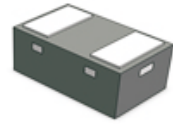
High-Reliability and High-Performance

$I_o = 500\text{mA}$

$V_R = 30\text{V}$

RoHS Device

Halogen Free



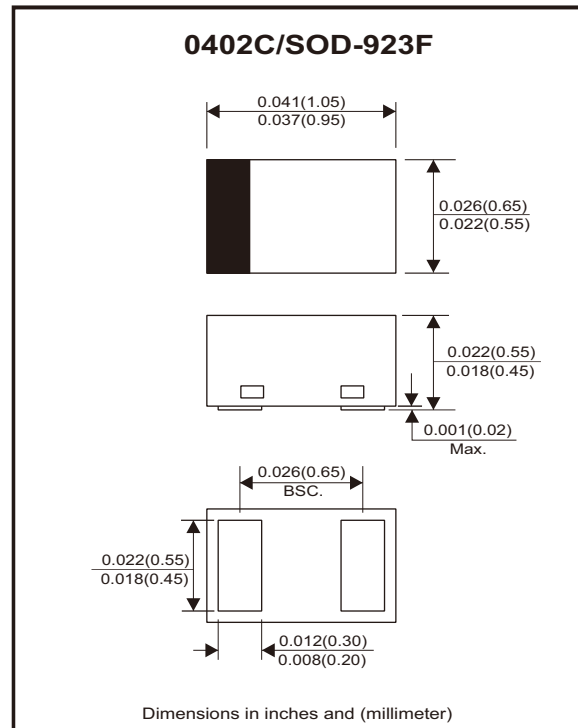
Features

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

Mechanical data

- Case: 0402C/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any
- Weight: 0.001 grams(approx.).

Circuit Diagram



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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse stand-off voltage		V_{RRM}			30	V
DC reverse voltage		V_R			30	V
Mean rectifying current		I_o			500	mA
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load, 1cycle (JEDEC method)	I_{FSM}			3	A
Thermal resistance	Junction to ambient	$R_{\theta JA}$			250	$^\circ\text{C/W}$
Total power dissipation	$T_A \leq 25^\circ\text{C}$	P_D			400	mW
Junction temperature range		T_J	-40		+125	$^\circ\text{C}$
Storage temperature range		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	$I_F = 10\text{mA}$	V_F			0.25	V
	$I_F = 100\text{mA}$				0.34	
	$I_F = 500\text{mA}$				0.45	
Reverse current	$V_R = 30\text{V}$, $T_A=25^\circ\text{C}$	I_R		90	200	μA
Diode capacitance	$V_R = 1\text{V}$, $f=1\text{MHz}$	C_D		36		pF

Rating and Characteristic Curves (CDBQC0530L-HF)

Fig.1 - Forward Characteristics

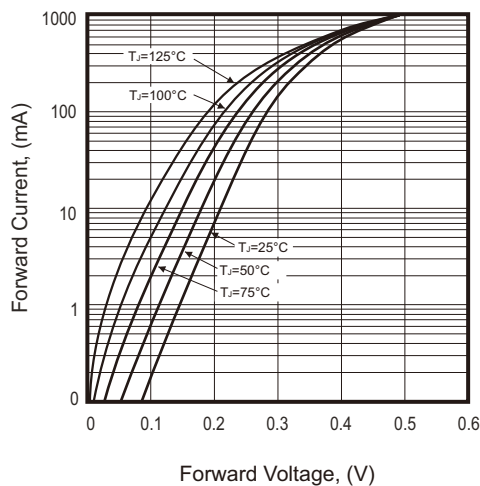


Fig.2 - Reverse Characteristics

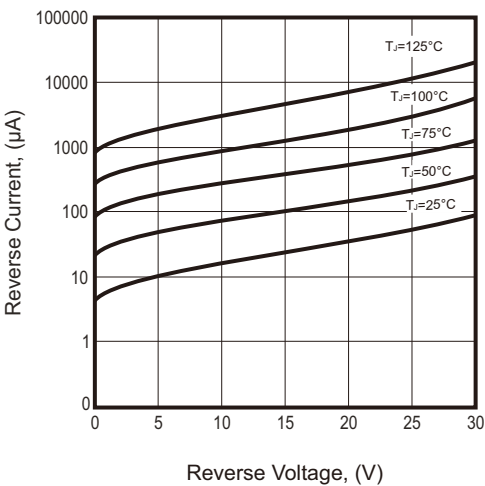


Fig.3 - Capacitance Characteristics

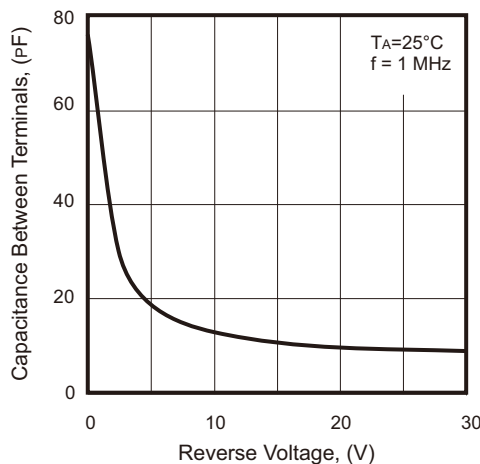


Fig.4 - Forward Current Derating Curve

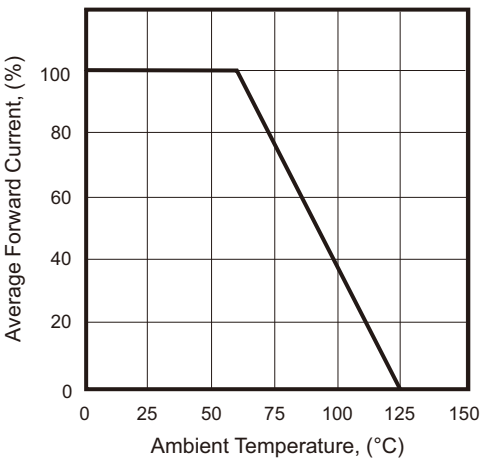
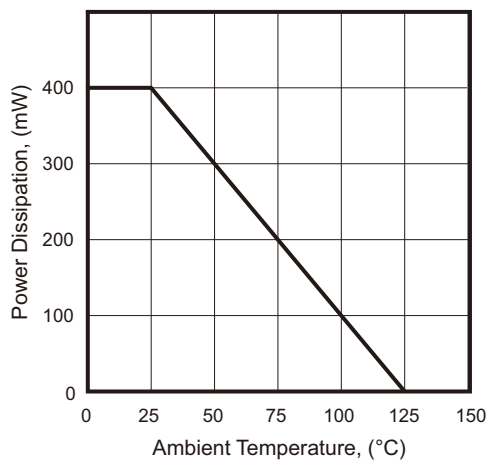
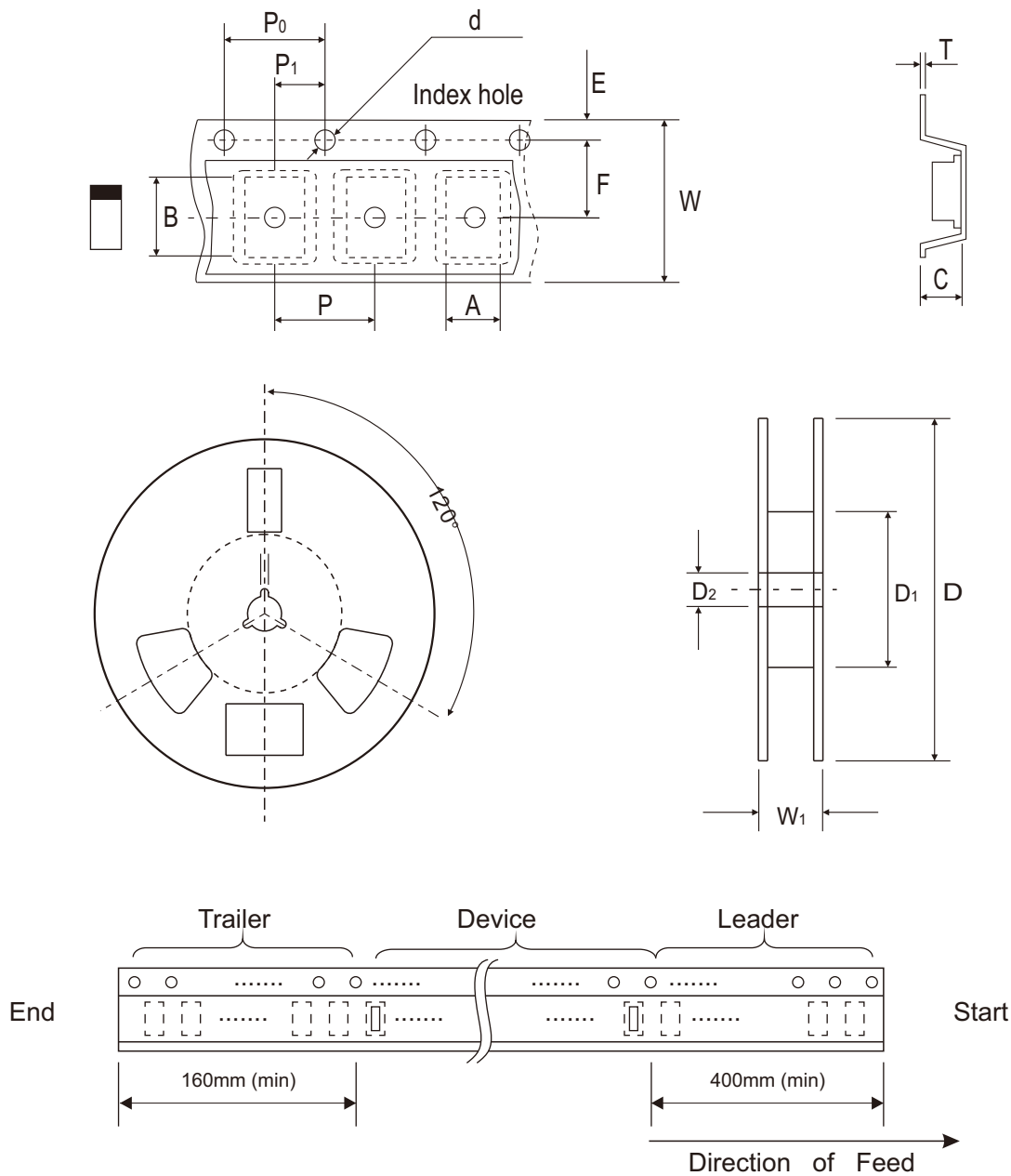


Fig.5 - Power Derating Curve



Reel Taping Specification



0402C (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

0402C (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

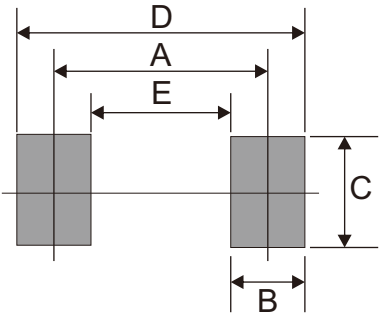
Part Number	Marking Code
CDBQC0530L-HF	BW



xx = Product type marking code

Suggested PAD Layout

SIZE	0402C/SOD-923F	
	(mm)	(inch)
A	0.70	0.028
B	0.40	0.016
C	0.60	0.024
D	1.10	0.043
E	0.30	0.012



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0402C/SOD-923F	5,000	7