

CPDQC5V0USP-IPHF

High-Reliability and High-Performance

RoHS Device

Halogen Free



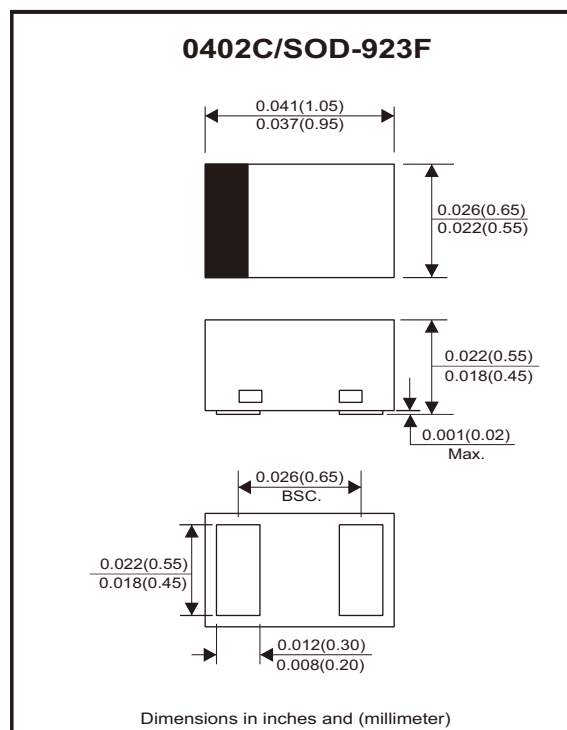
Features

- IEC61000-4-2 (ESD) $\pm 10\text{kV}$.
- Working voltage: 5V
- Typical capacitance: 0.3pF

Mechanical data

- Case: 0402C/SOD-923F small outline plastic package.
molded plastic.
- Terminals: Gold plated, solderable per
MIL-STD-750, method 2026.
- Mounting position: Any.
- High temperature soldering guaranteed:
260°C/10 second.
- Weight: 0.001 grams(approx.).

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak pulse power ($t_p = 8/20\mu\text{s}$ waveform)	PPP	30	W
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	VESD	± 10	kV
Operating temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V_{RWM}			5	V
Reverse leakage current	$V_R = 5\text{ V}$	I_R			100	nA
Reverse breakdown voltage	$I_R = 1\text{ mA}$	$V(BR)$	6		9	V
Clamping voltage	$I_{PP} = 1\text{ A}$	V_C			12	V
	$I_{PP} = 2\text{ A}$	V_C			15	V
Junction capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_J		0.3	0.5	pF

Rating and Characteristic Curves (CPDQC5V0USP-IPHF)

Fig.1 - 8/20μs Peak Pulse Current
Waveform Acc. IEC61000-4-5

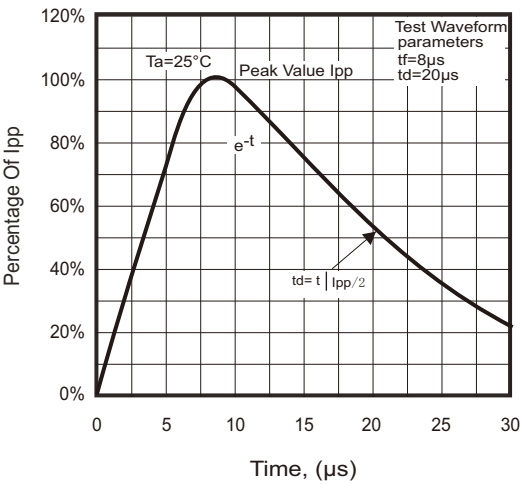


Fig.2 - Power Rating Derating Curve

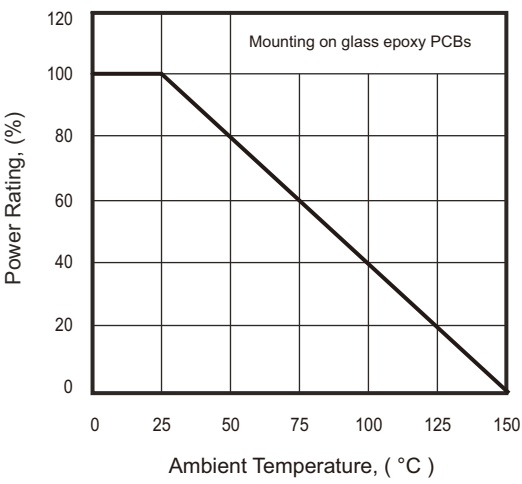


Fig.3 - Clamping Voltage Vs.
Peak Pulse Current

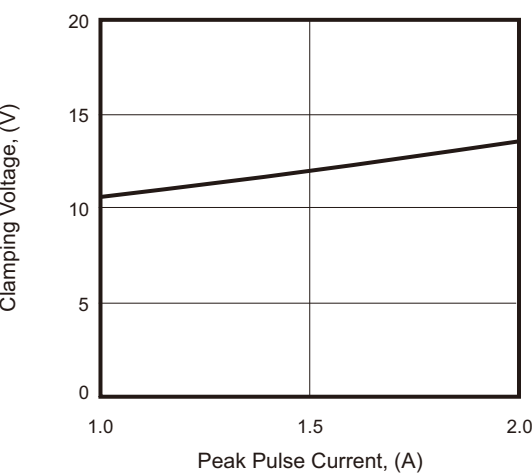
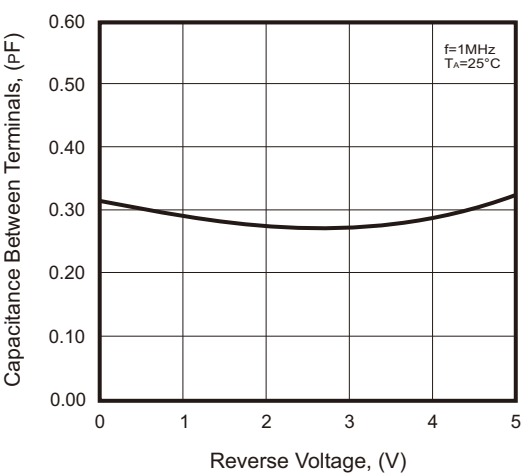
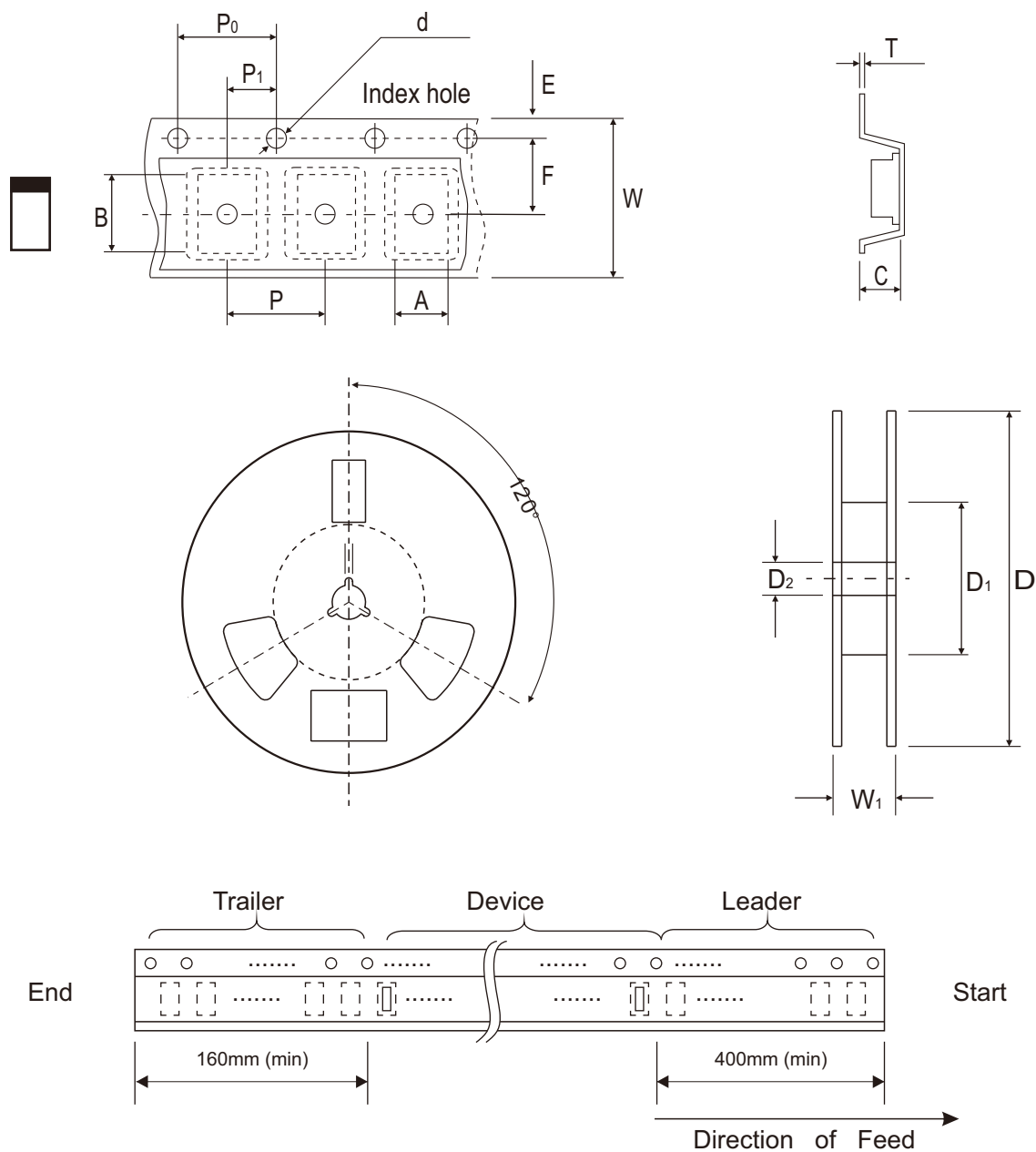


Fig.4 - Capacitance Between
Terminals Characteristics



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

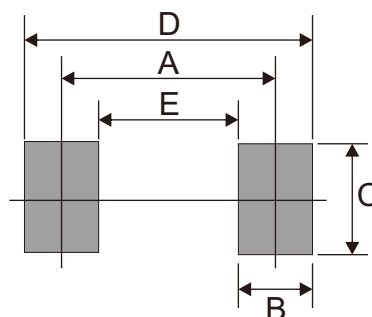
Marking Code

Part Number	Marking Code
CPDQC5V0USP-IPHF	5S



Suggested PAD Layout

SIZE	0402C/SOD-923F	
	(mm)	(inch)
A	0.70	0.028
B	0.40	0.016
C	0.60	0.028
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