

## ACPDQC5V0SC-HF

### High-Reliability and High-Performance

### RoHS Device

### Halogen Free



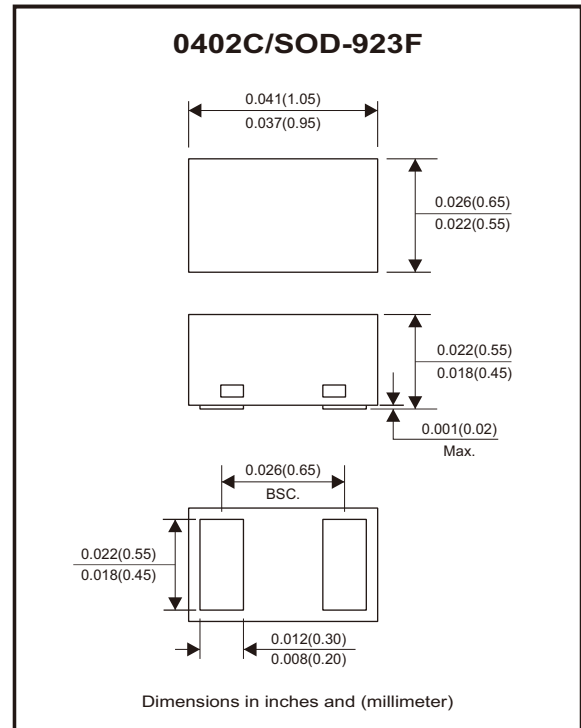
#### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Working Voltage: 5V
- Typical capacitance: 0.2pF
- AEC-Q101 Qualified.

#### 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 TA=25°C unless otherwise noted )

Parameter	Symbol	Value	Unit
Peak pulse power (tp = 8/20µs waveform)	PPP	36	W
ESD per IEC 61000-4-2(Air)	VESD	±15	kV
ESD per IEC 61000-4-2(Contact)		±8	
Operating temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

#### Electrical Characteristics ( at TA=25°C unless otherwise noted )

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		VRWM			5	V
Reverse leakage current	VR = 5V	IR			100	nA
Reverse breakdown voltage	IR = 1mA	V(BR)	5.6			V
Clamping voltage	I <sub>PP</sub> = 1A	Vc		13	15	V
	I <sub>PP</sub> = 2A	Vc			18	V
Junction capacitance	VR = 0V , f = 1MHz	CJ		0.2	0.4	pF

## Rating and Characteristic Curves (ACPDQC5V0SC-HF)

Fig.1 - 8/20 $\mu$ s Peak Pulse Current Wave  
Form Acc. IEC 61000-4-5

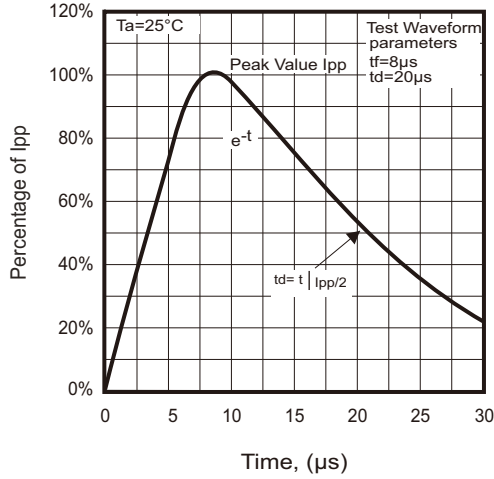


Fig.2 - Typical Capacitance Between  
Terminals Characteristics

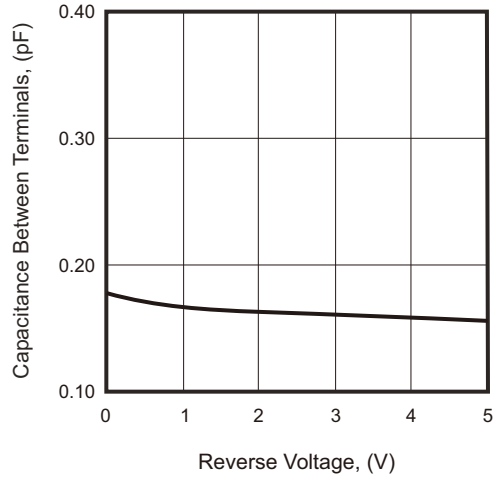


Fig.3 - Clamping Voltage Vs.  
Peak Pulse Current

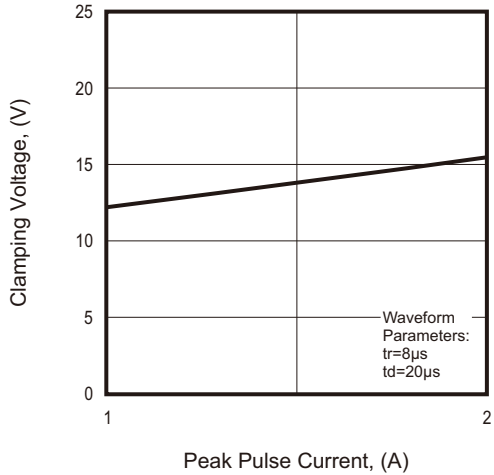
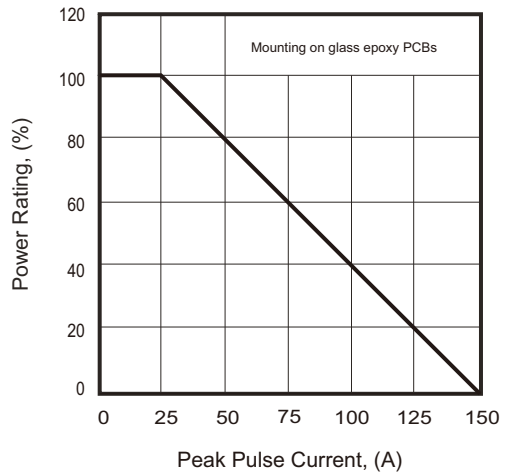
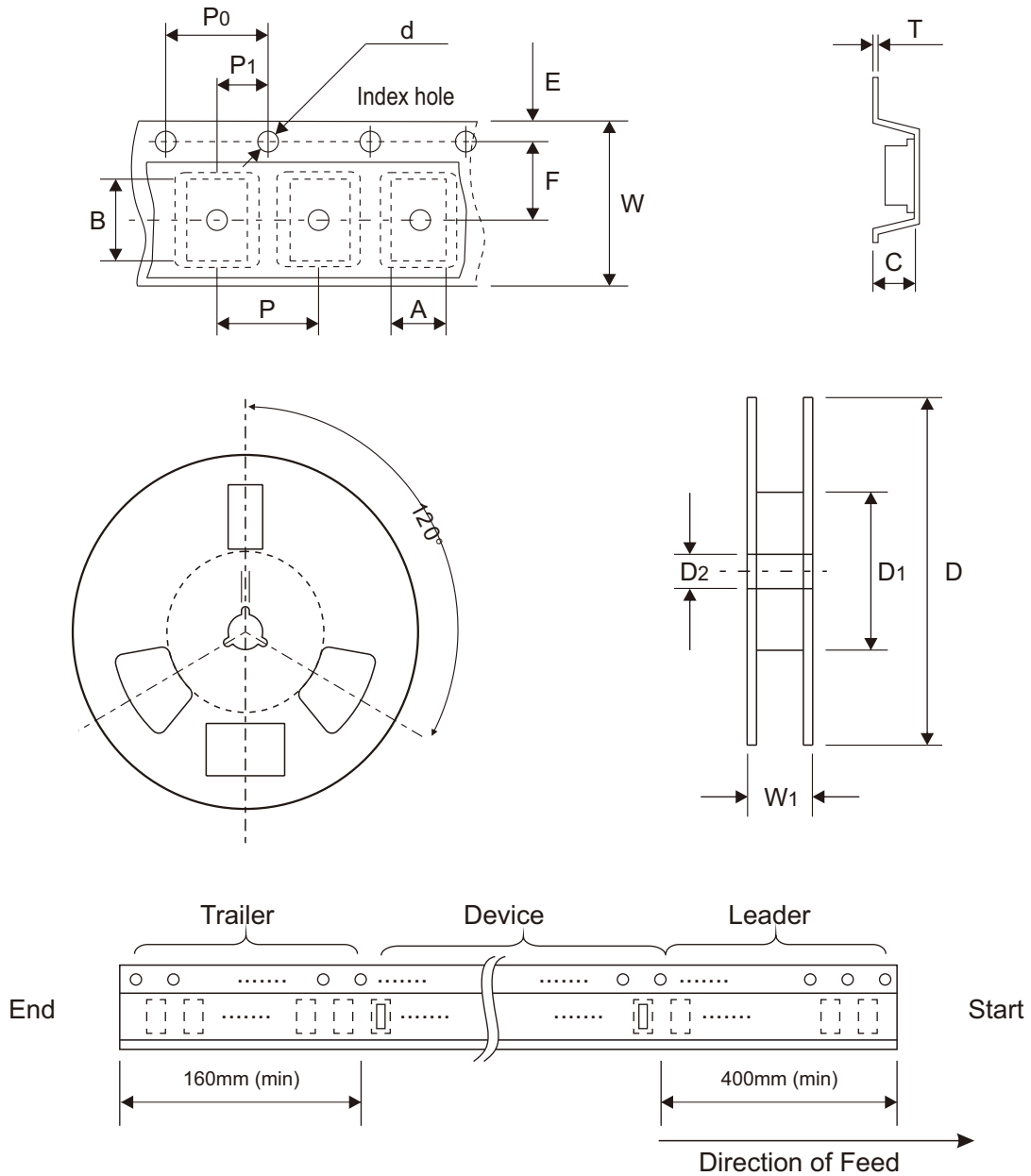


Fig.4 - Power Rating Derating Curve



## Reel Taping Specification



0402C (SOD-923F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0.00	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 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0402C (SOD-923F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(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 - 0.00
	(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 - 0.000

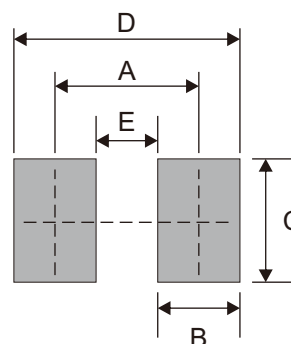
## Marking Code

Part Number	Marking Code
ACPDQC5V0SC-HF	5SP



## 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