

ACPDQC5V0C-HF

RoHS Device
Halogen Free

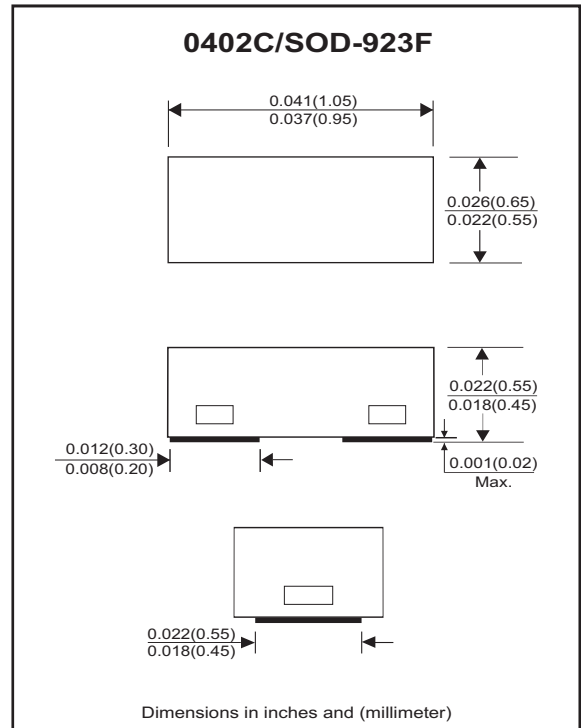


Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Ultra small SMD package:0402.
- Comply with AEC-Q101

Mechanical data

- Case: 0402C/SOD-923F standard package, molded plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.001 grams(approx.).



Circuit diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-Off voltage		V_{RWM}	-	-	5	V
Diode breakdown voltage	$I_R = 1mA$	V_{BD}	6.1	7.0		V
Leakage current	$V_R = 5V$	I_L		0.1	2.0	μA
Junction capacitance	$V_R = 0V, f = 1MHz$	C_T		25	30	pF
ESD capability	IEC 61000-4-2(air)	ESD			16	kV
	IEC 61000-4-2(contact)	ESD			8	kV
Clamping Voltage	$I_{PP} = 1 A, t_p = 8/20\mu s$	V_c			9	V
	$I_{PP} = 4 A, t_p = 8/20\mu s$	V_c			14.5	V
Peak Pulse Power	$T_P = 8/20\mu s$	PPP			58	W
Operation temperature		T_j			125	°C
Storage temperature		T_{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (ACPDQC5V0C-HF)

Fig.1 - 8/20us Peak Pulse Current Waveform Acc. IEC 61000-4-5

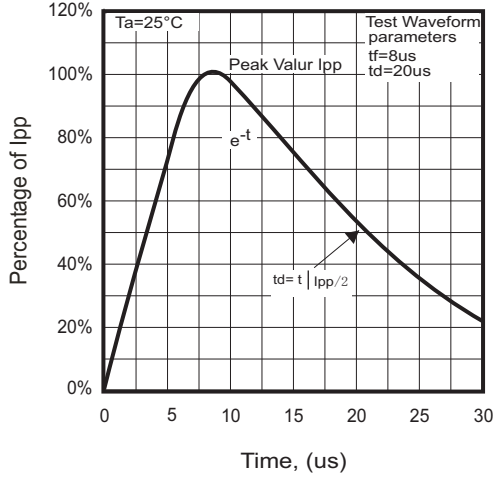


Fig.2 - Typical Capacitance Between Terminals Characteristics

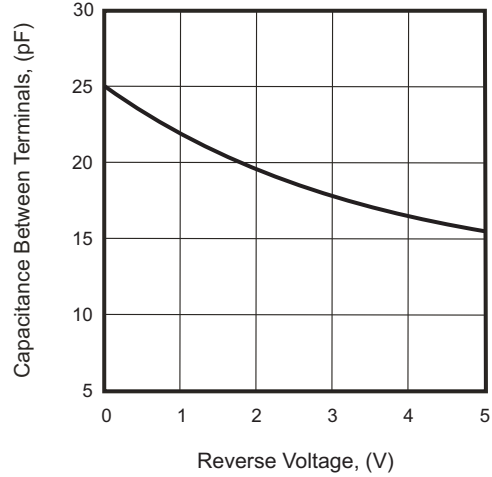


Fig.1 - Reverse Characteristics

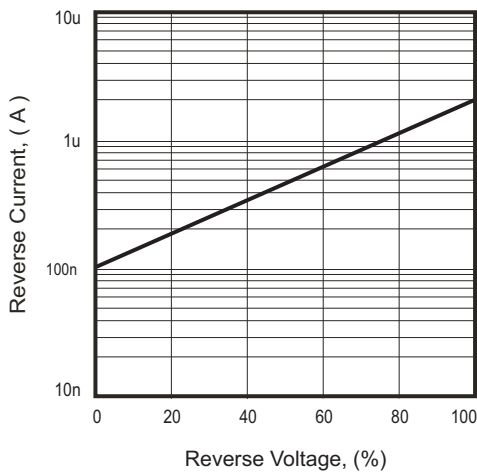


Fig.4 - Clamping Voltage Vs. Peak Pulse Current

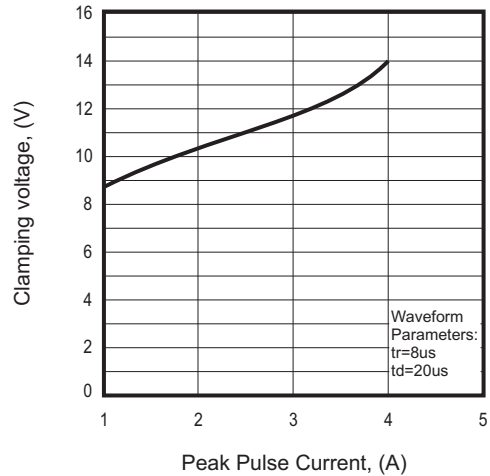
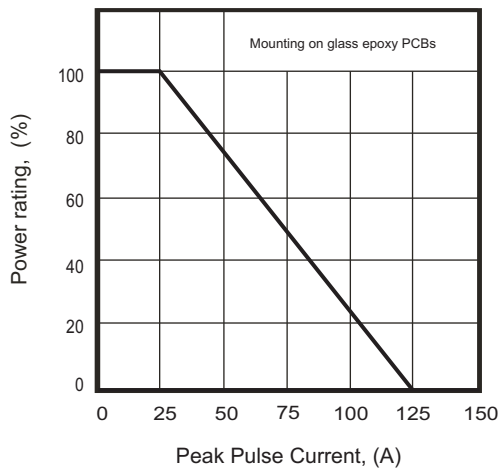
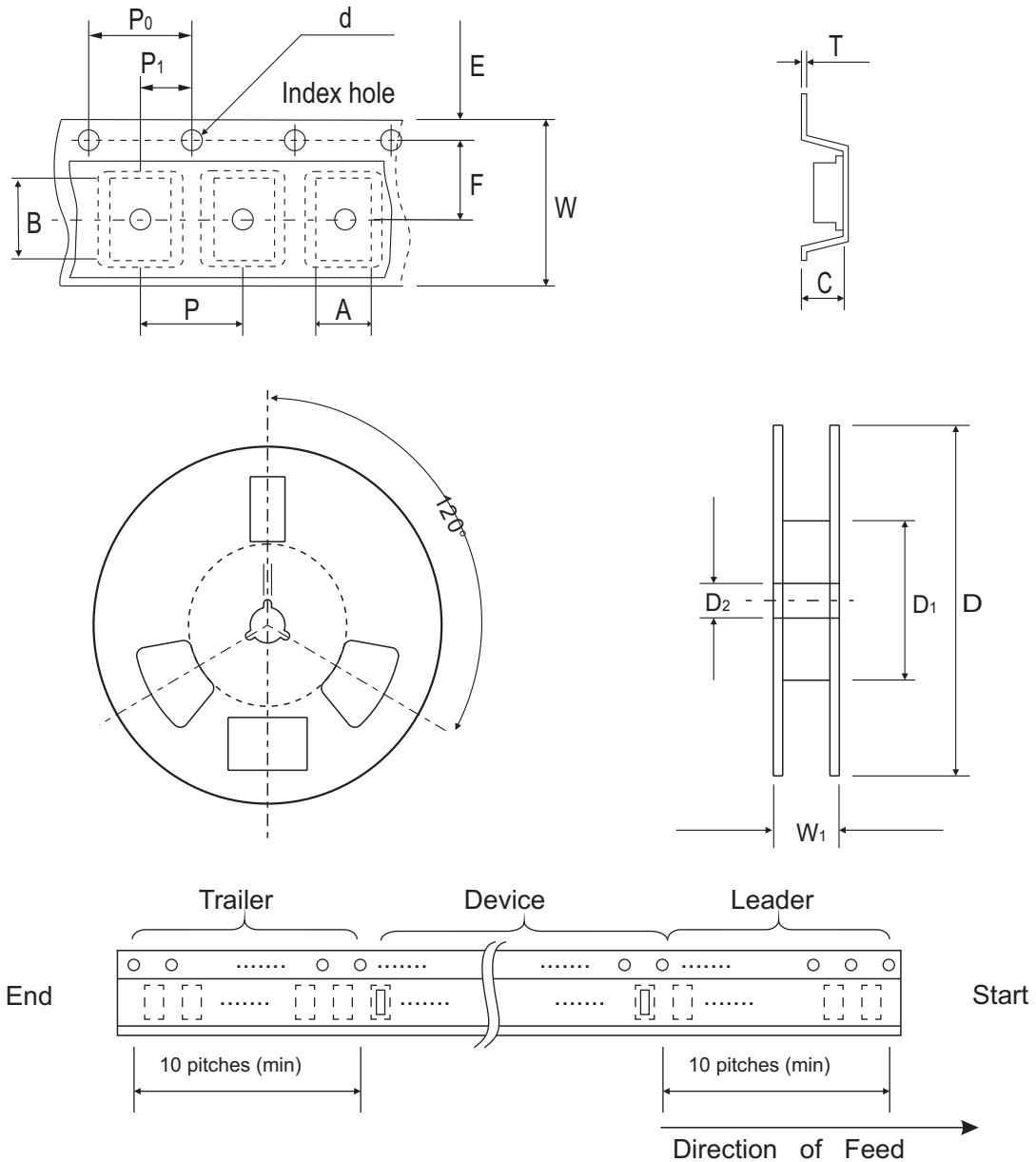


Fig.4 - Power Rating Derating Curve



Reel Taping Specification



0402C/ SOD-923F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1.00	60.0 MIN.	13.0 ± 0.20
	(inch)	0.030 ± 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

0402C/ SOD-923F	SYMBOL	E	F	P	P ₀	P ₁	T	W	W
	(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	13.50 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.

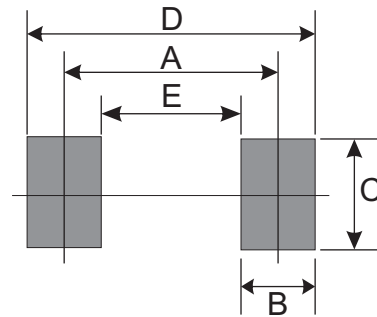
Marking Code

Part Number	Marking Code
ACPDQC5V0C-HF	E5



Suggested PAD Layout

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