

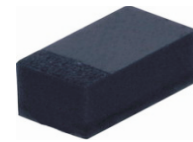


# THE DATASHEET OF CPDQR5V0USP-HF



## CPDQR5V0USP-HF

RoHS Device  
Halogen Free

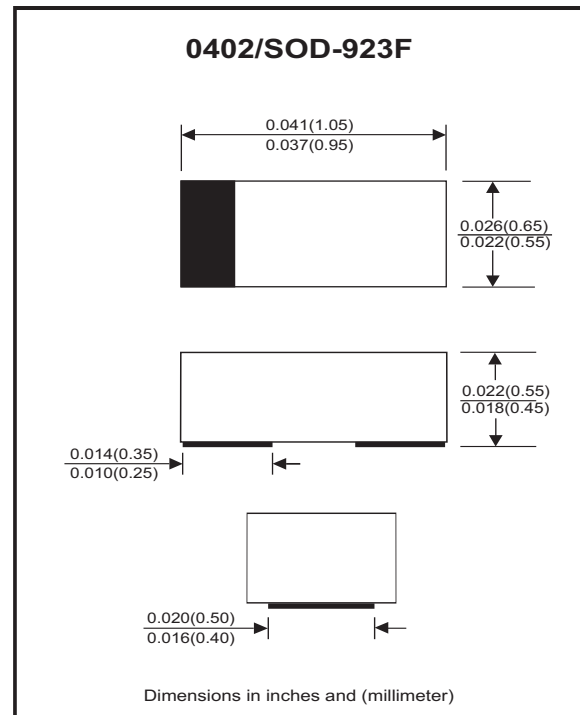


### Features

- Uni-directional ESD protection.
- Surface mount package.
- Low capacitance.
- Low Leakage current.
- High component density.

### Mechanical data

- Case: 0402/SOD-923 standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Marking Code: Cathode band & 5S
- Mounting position: Any.
- Weight: 0.001 grams(approx.).



### Circuit Diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		VRWM			5.0	V
Forward voltage	IF = 10mA	VF			1.5	V
Breakdown voltage	IR = 1mA	VBR	5.4			V
Reverse leakage current	VR = 5V	IR			1.0	µA
Junction capacitance	VR = 0V, f = 1MHz	CJ		0.6	0.9	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			15 8	kV
Clamping voltage	I <sub>PP</sub> = 1A, T <sub>P</sub> =8/20us I <sub>PP</sub> = 2.5A, T <sub>P</sub> =8/20us	Vc			13 20	V
Peak pulse power		PPP			50	W
Operation temperature range		TJ	-55		150	°C
Storage temperature range		TSTG	-55		150	°C

## RATING AND CHARACTERISTIC CURVES (CPDQR5V0USP-HF)

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

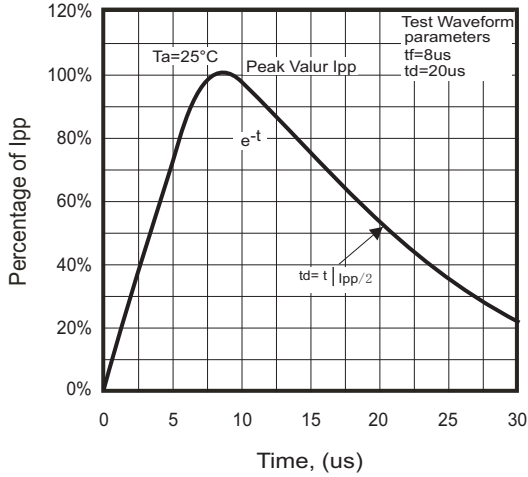


Fig.2 - Power Rating Derating Curve

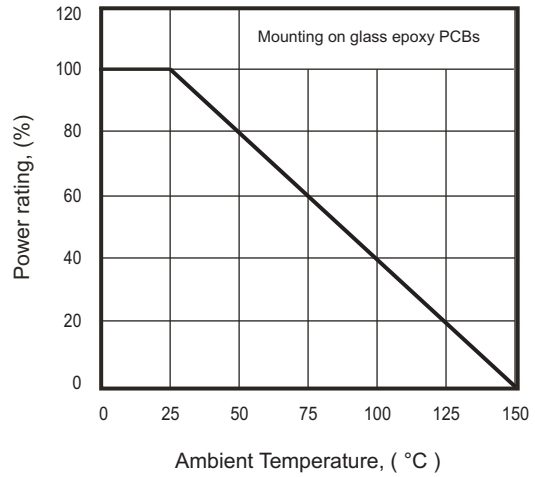


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

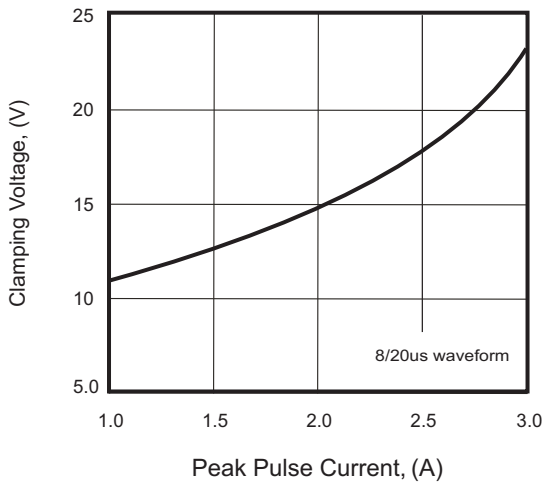


Fig.4 - Forward Voltage Vs. Forward Current

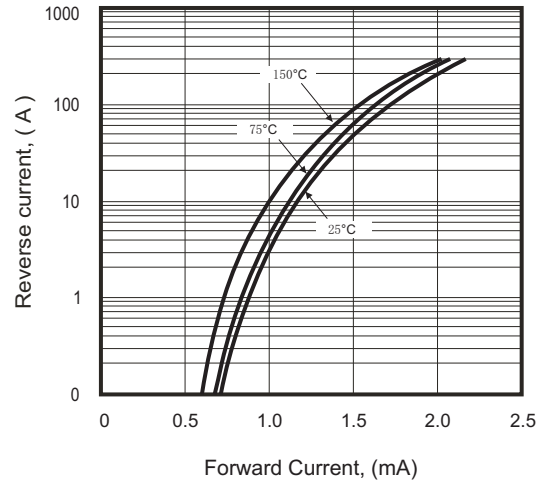
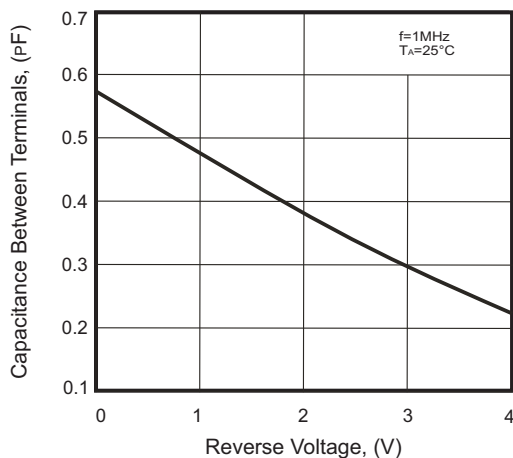
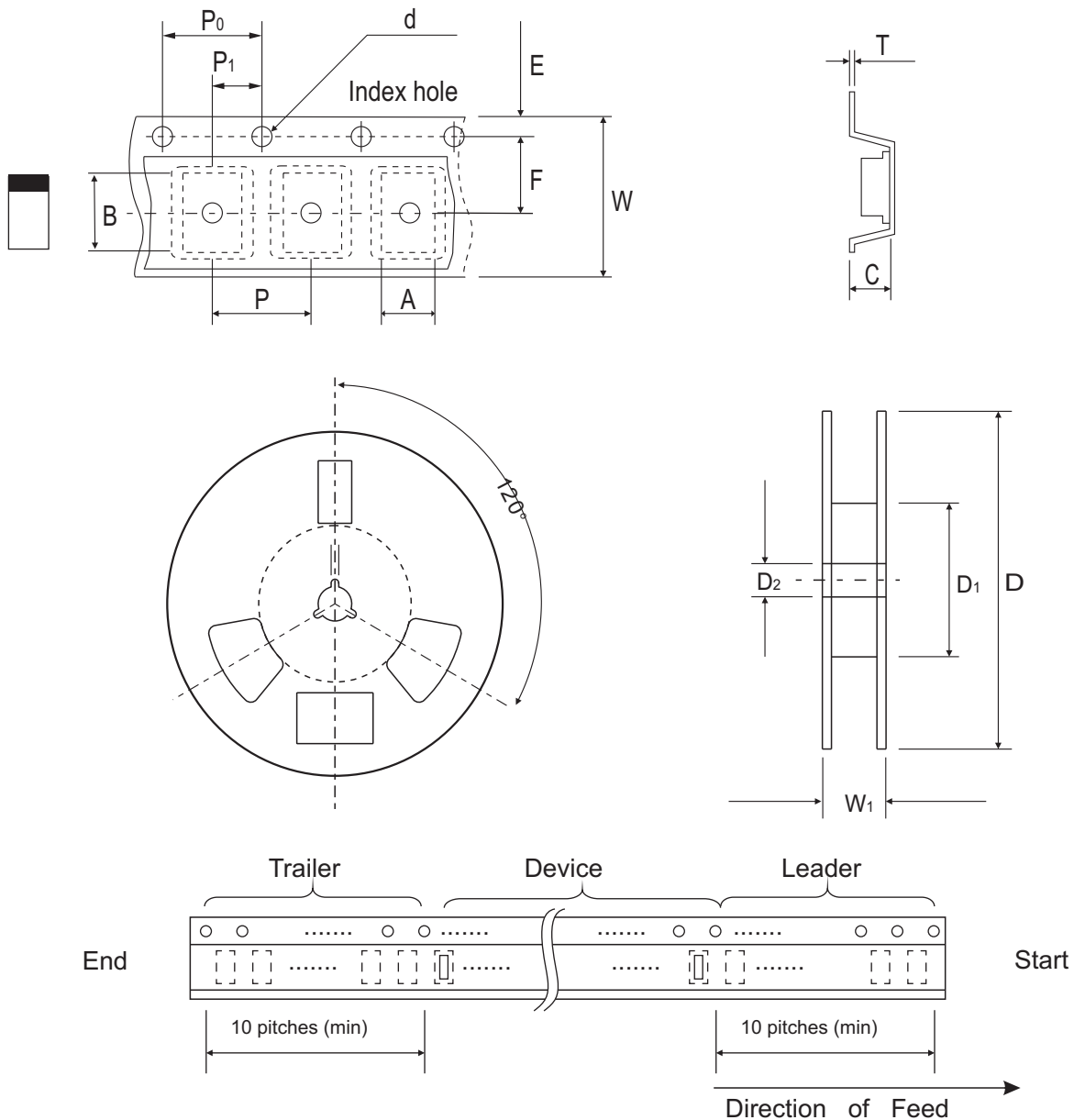


Fig.5 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1	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 ± 0.040	2.362 MIN.	0.512 ± 0.008

0402 (SOD-923F)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(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	13.5 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.

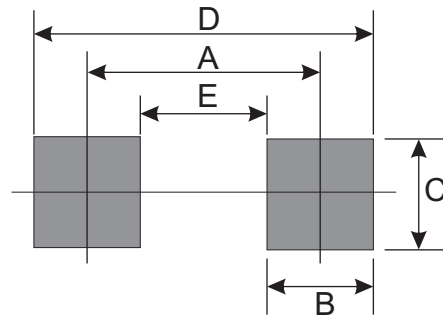
## Marking Code

Part Number	Marking Code
CPDQR5V0USP-HF	5S



## Suggested PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.750	0.030
B	0.500	0.020
C	0.700	0.028
D	1.250	0.049
E	0.250	0.010





## Standard Packaging

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

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