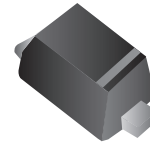


CPDQ5V0USP-HF

RoHS Device
Halogen Free

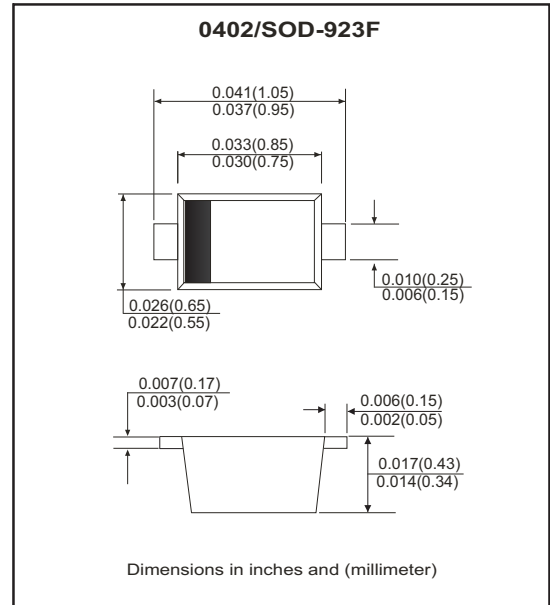


Features

- IEC61000-4-2 Level 4 ESD protection.
- ESD Rating of Class 3(>16kV) per Human Body Mode.
- Supper low capacitance 0.5 pF Typ.
- Low clamping voltage.
- Low body height: 0.016"(0.4mm)

Mechanical data

- Epoxy: Meets UL 94V-0
- Case: 0402/SOD-923F small outline plastic package.
Void-free, Transfer-molded, Thermosetting plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-750,method 2026.
- Mounting position: Any.
- High temperature soldering guaranteed: 260°C/10 second.
- Weight: 0.001mgram(approx.).



Circuit Diagram



Maximum Rating and Electrical Characteristics

(at TA=25°C unless otherwise noted, VF=0.9V Max. @ IF=10mA for all types)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Maximum working Peak Reverse Voltage		VRWM			5.0	V
Maximum diode breakdown voltage	IR = 1mA	VBR	5.4			V
Maximum reverse leakage current	VRwm = 5V	IR			1.0	µA
Capacitance	VR = 0V, f = 1MHz	C		0.5	0.9	pF
ESD capability	IEC 61000-4-2(air)	ESD			15	kV
	IEC 61000-4-2(Contact)	ESD			10	kV
Clamping Voltage	IPP = 1 A, tp=8/20us	Vc			9.8	V
Peak Pulse Power	TP=8/20us	PPP			9.8	W
Total power dissipation	FR-5 board @ TA=25°C	Pd			150	mW
Junction temperature		Tj	-55		125	°C
Storage temperature		TSTG	-55		150	°C

NOTES:

- FR-5=1.0*0.75*0.62in.
- Surge current waveform per Figure1.
- VBR is measured with a pulse test current IT at an ambient temperature of 25°C.

RATING AND CHARACTERISTIC CURVES (CPDQ5V0USP-HF)

Fig. 1 - Pulse Waveform

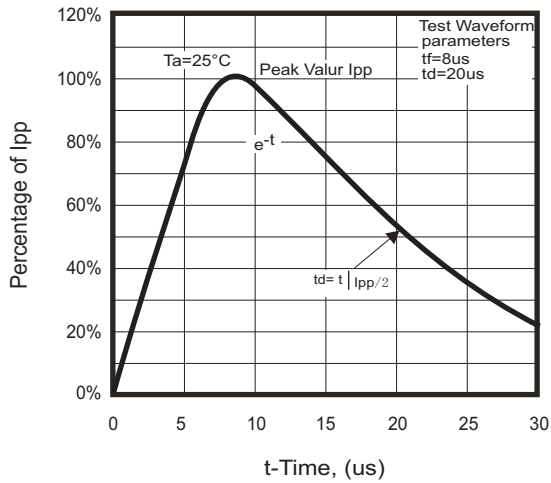
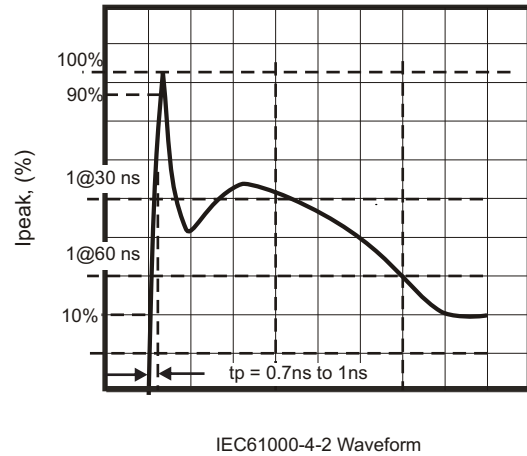
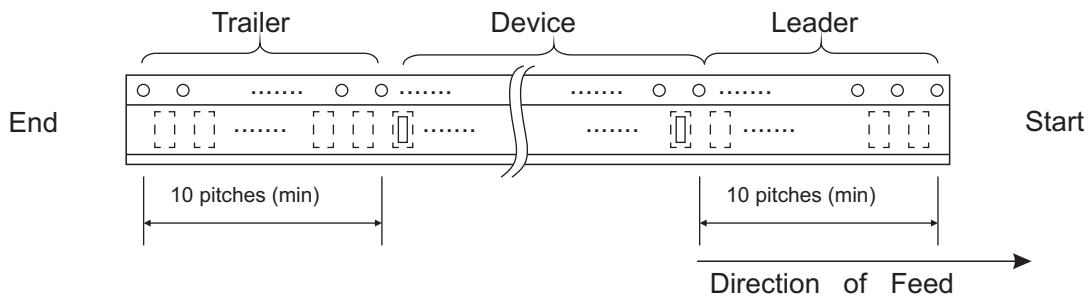
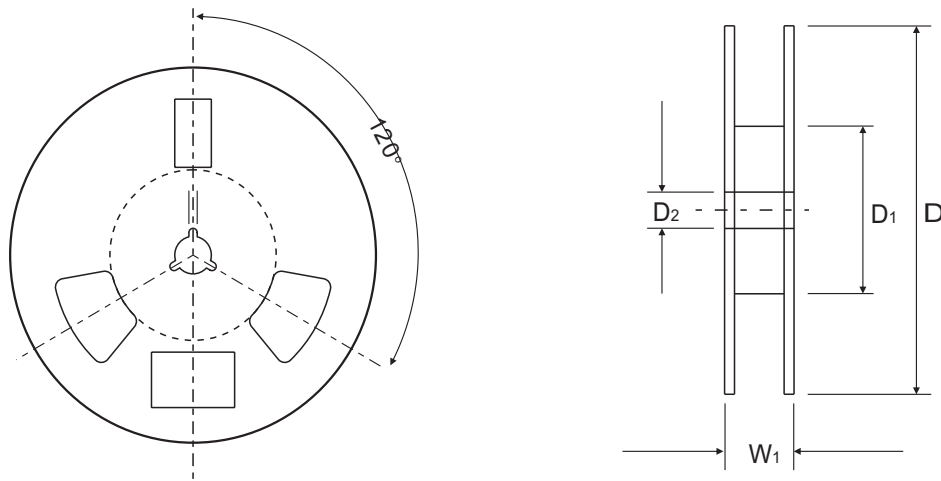
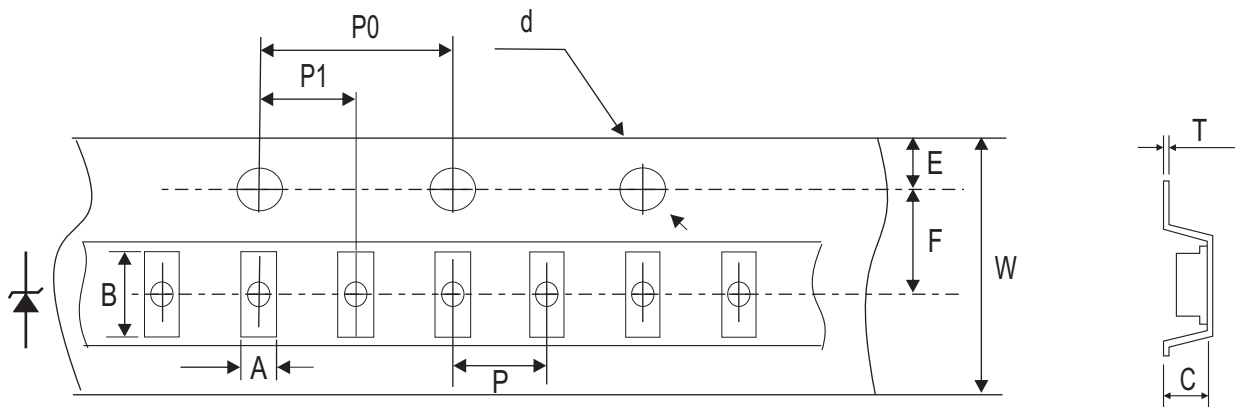


Fig.2- IEC61000-4-2 Waveform



Reel Taping Specification



0402 (SOD-923F)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.70 ± 0.05	1.12 ± 0.05	2.40 mm	1.50 + 0.10	178 MAX.	50.0 MIN.	13.0 ± 0.50
	(inch)	0.028 ± 0.002	0.044 ± 0.002	0.094 mm	0.059 + 0.004	7.008 MAX.	1.969 MIN.	0.512 ± 0.020

0402 (SOD-923F)	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.229 ± 0.020	8.00 +0.30 / -0.10	10.90 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.314+0.012 / -0.004	0.43 MAX.

Marking Code

Part Number	Marking Code	
CPDQ5V0USP-HF	D	D ⌘



Month Code:

Month	Odd Year (per A. D.)	Even Year (per A. D.)
Jan	1	E
Feb	2	F
Wer	3	H
Apr	4	J
May	5	K
Jun	6	L
Jul	7	N
Aug	8	P
Sep	9	U
Oct	T	X
Nov	V	Y
Dec	C	Z

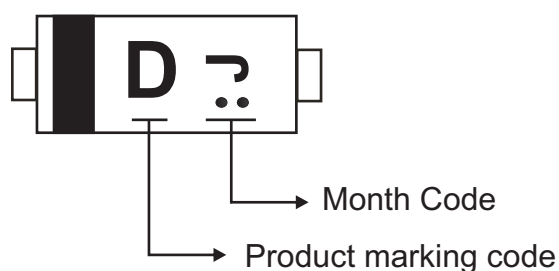


D: Product marking code

⌘: Month Code

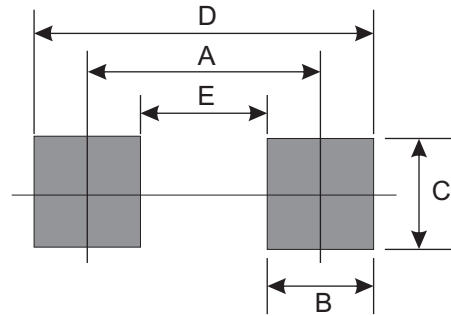
For example as follows:

- Product marking code: D
- Manufacture date_ Year: 2012 (Even year) / Month: Apr
Month code: J (Month code rotated 90° and two dots below the month code.)



Suggested PAD Layout

SIZE	0402/SOD-923F	
	(mm)	(inch)
A	0.900	0.035
B	0.300	0.012
C	0.400	0.016
D	1.200	0.047
E	0.600	0.024



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0402/SOD-923	8,000	7