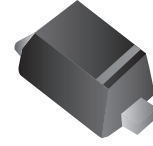


CPDQ12V0U-HF

RoHS Device
Halogen Free

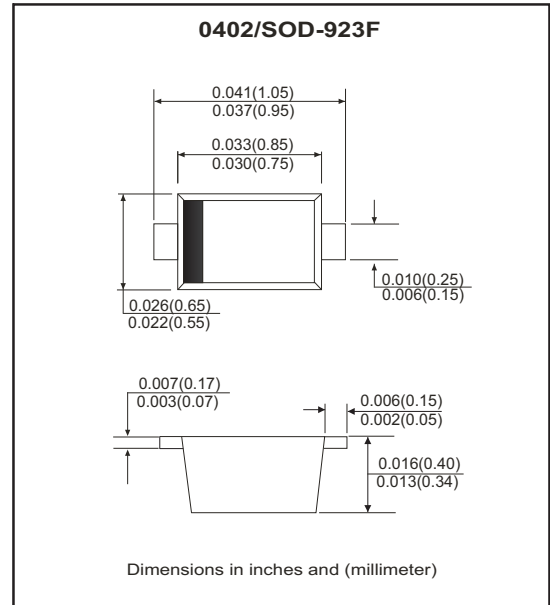


Features

- IEC61000-4-2 Level 4 ESD protection.
- ESD Rating of Class 3(>16kV) per Human Body Mode.
- Low body height: 0.017"(0.43mm)
- Low Leakage

Mechanical data

- Epoxy: Meets UL 94V-0
- Case: 0402/SOD-923F small outline plastic package.
molded plastic.
- Terminals: Matte tin plated, solderable per
MIL-STD-202,method 208.
- 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 specified. VF=0.9V Max. @ IF=10mA for all types)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working Peak Reverse Voltage		VRWM			12	V
Breakdown voltage	IR = 1mA	VBR	13.5			V
Maximum reverse leakage current	VR = 12V	IR			1.0	μA
Junction capacitance	VR = 0V, f = 1MHz	CT		30		pF
ESD capability	IEC 61000-4-2(air)	ESD			15	kV
	IEC 61000-4-2(Contact)	ESD			8	kV
Clamping Voltage	Ipp = 5.9 A, tp=8/20us	Vc			23.7	V
Peak Pulse Power	TP=8/20us	PPp		140		W
Junction temperature		Tj	-55		150	°C
Storage temperature		TSTG	-55		150	°C

NOTES:

- FR-5=1.0*0.75*0.62 in.
- VBR is measured with a pulse test current IT at an ambient temperature of 25°C.
- Surge current waveform per Figure3.

RATING AND CHARACTERISTIC CURVES (CPDQ12V0U-HF)

Fig. 1 - Typical breakdown voltage versus temperature

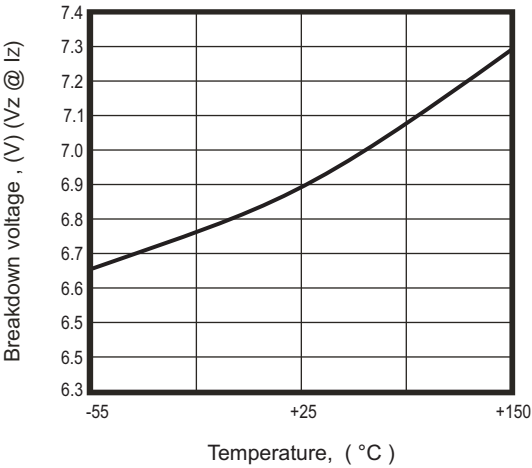


Fig. 2 - Typical leakage current versus temperature

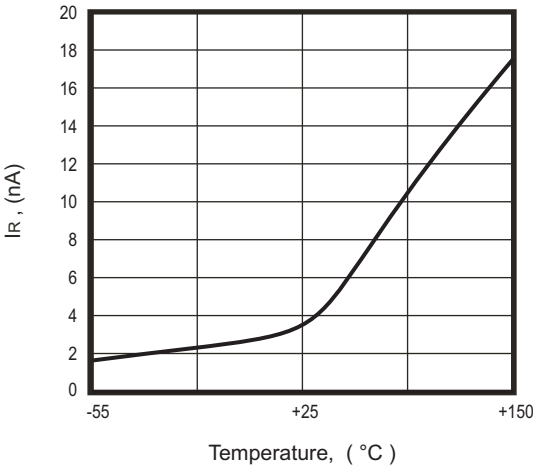
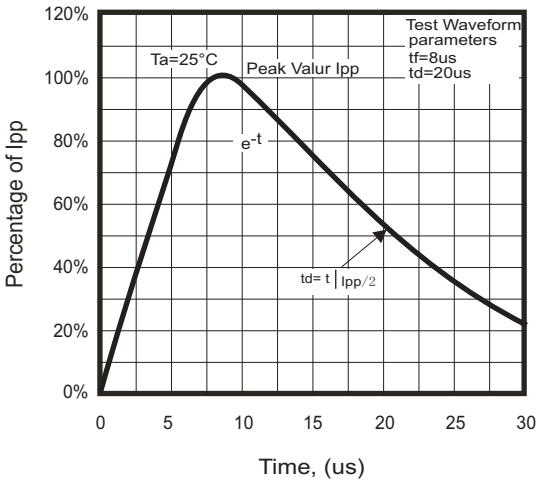
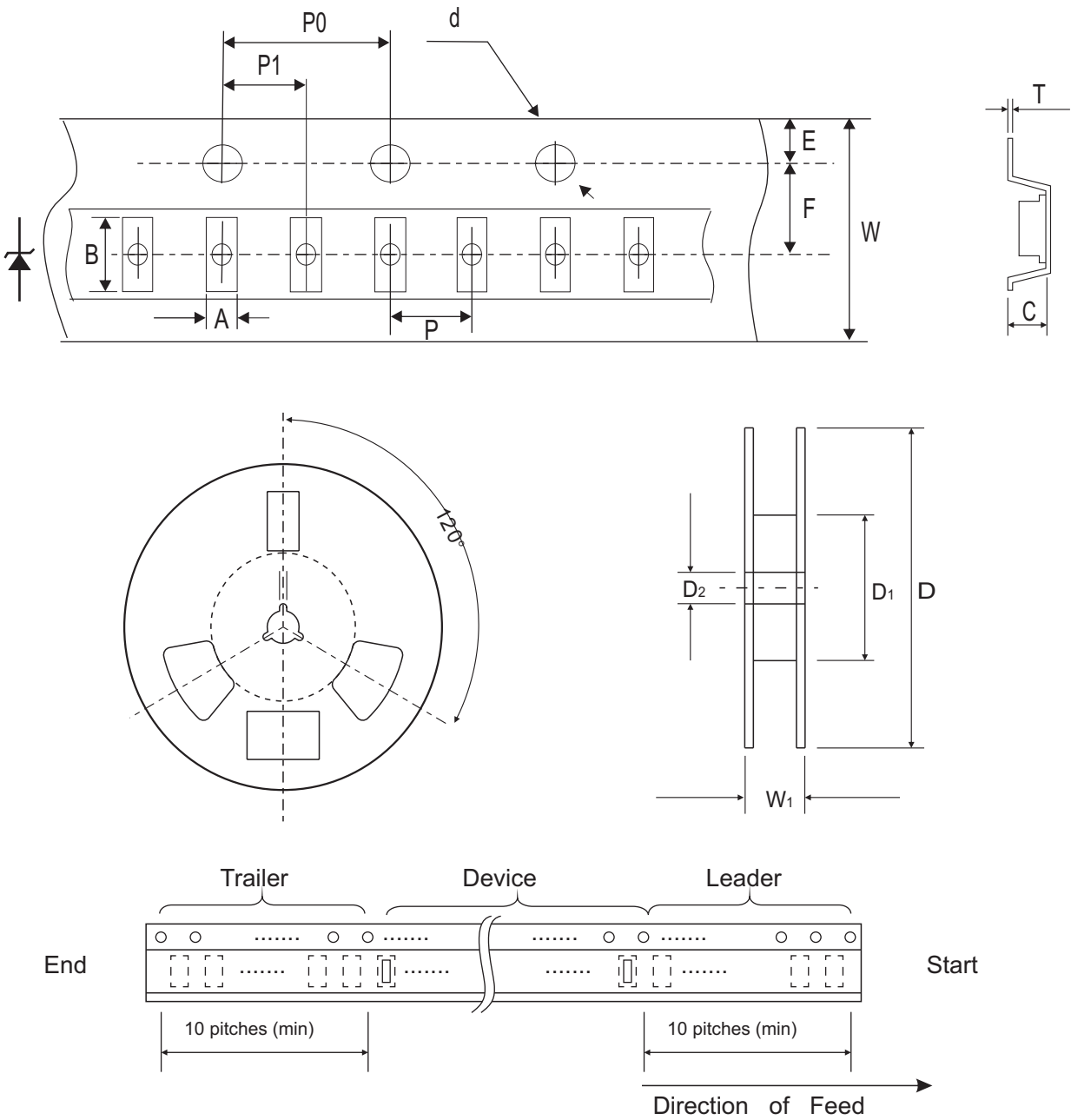


Fig. 3 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5



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
CPDQ12V0U-HF	H



H: Product marking code

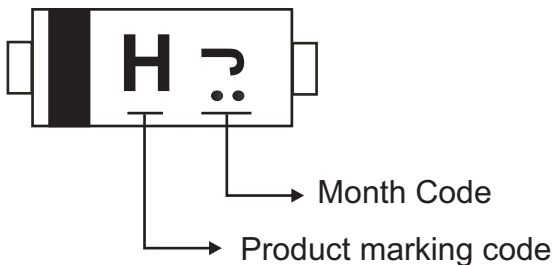
⌘: Month Code

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

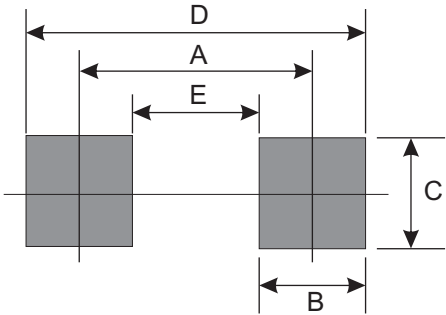
For example as follows:

- Product marking code: H
- 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-923F	5,000	7