Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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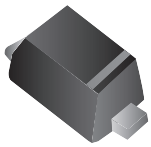
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

SMD ESD Protection Diode

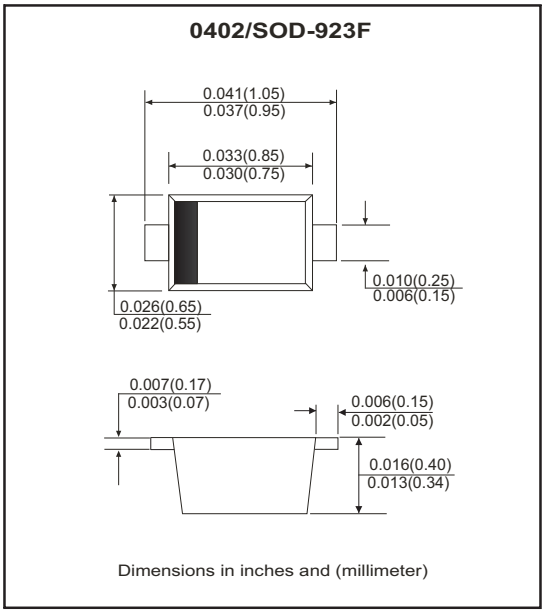
CPDQ3V3-HF

RoHS Device
Halogen Free



Features

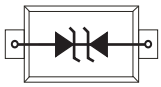
- IEC61000-4-2 Level 4 ESD protection.
- ESD Rating of Class 3 per Human Body Mode.
- Peak Power up to 150 Watts @ 8x20μs Pulse.
- Low Leakage current.
- Response Time is Typically <1ns
- Working Voltage: 3.3V



Mechanical data

- Case: 0402/SOD-923F small outline plastic package.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- High temperature soldering guaranteed: 260°C/10 second.
- Weight: 0.001 gram(approx.).

Circuit Diagram



Maximum Rating and Electrical Characteristics
(at T_A=25 °C unless otherwise specified)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Maximum working Peak Reverse Voltage		V_{RWM}			3.3	V
Maximum diode breakdown voltage	I_R = 1mA	V_{BR}	5.0			V
Maximum reverse leakage current	V_R = 3.3V	I_R			1	μA
Junction capacitance	V_R =0V,f =1MHz	C_T		25		pF
ESD capability	IEC 61000-4-2(air)	ESD			15	kV
	IEC 61000-4-2(Contact)	ESD			8	kV
Clamping Voltage	I_{PP} = 5 A, tp=8/20us	V_c			8.4	V
	I_{PP} = 11.2 A, tp=8/20us	V_c			14.1	V
Peak Pulse Power	T_P=8/20us	P_{PP}			158	W
Junction temperature		T_j			150	°C
Operation temperature		T_{OP}	-40		125	°C
Storage temperature		T_{STG}	-55		155	°C

NOTES:

1. V_{BR} is measured with a pulse test current IT at an ambient temperature of 25°C.

RATING AND CHARACTERISTIC CURVES (CPDQ3V3-HF)

Fig. 1 - Pulse Waveform

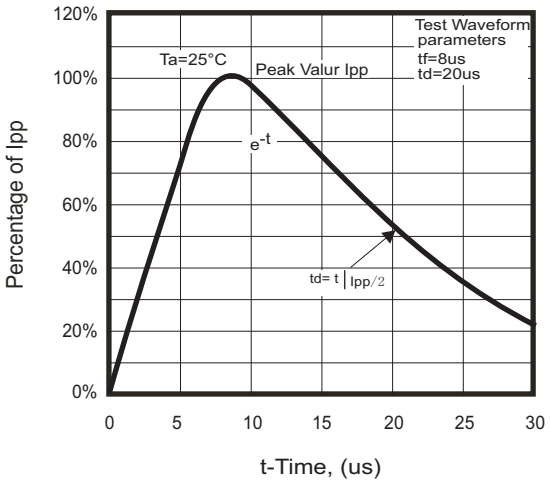
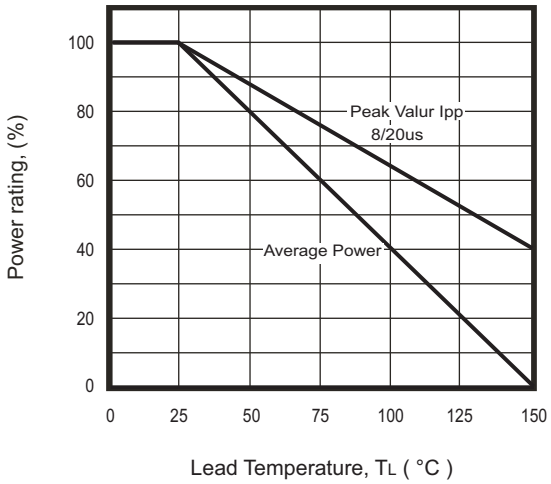
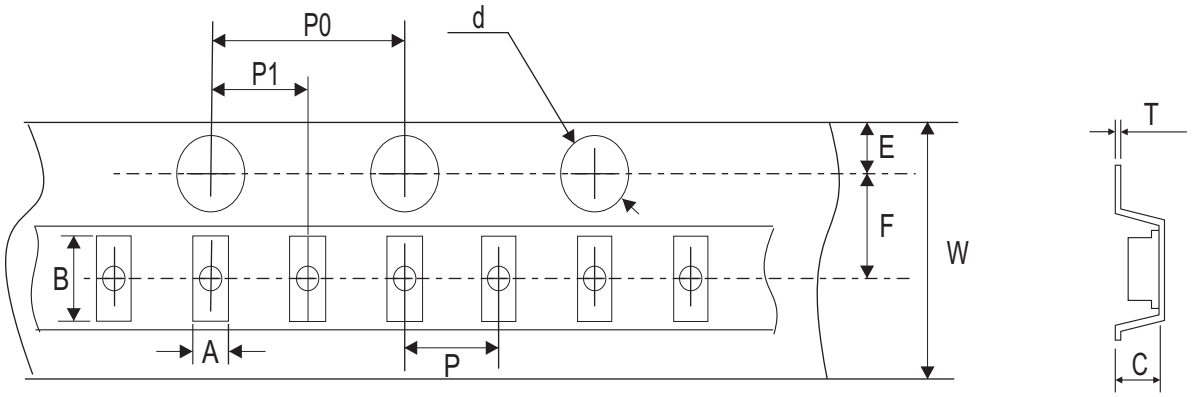
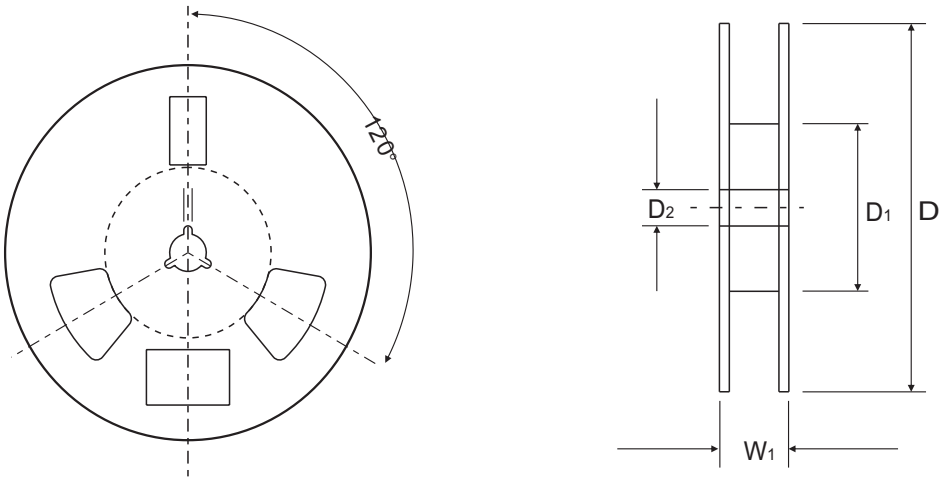


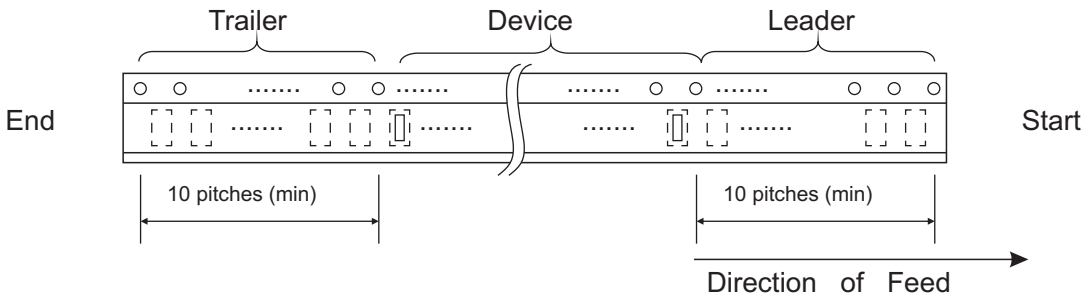
Fig. 2 - Power Derating Curve



Reel Taping Specification







	SYMBOL	A	B	C	d	D	D_1	D_2
0402 (SOD-923F)	(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

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
0402 (SOD-923F)	(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
CPDQ3V3-HF	B

B: Product marking code

: Month Code

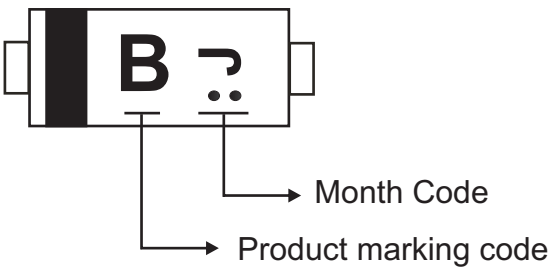
Month Code:

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:

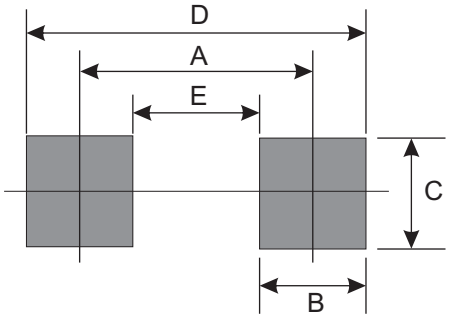
- Product marking code: B
- Manufacture date_ Year: 2012 (Even year) / Month: Apr

  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