

1. Applications

- Personal Digital Assistance
- Wireless System
- Cellular Phones
- Desktops and servers
- Pagers
- Peripherals

2. Feature List

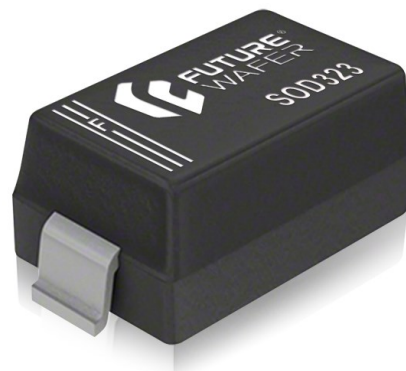
- Bi-directional Configurations
- ESD Protection:Level 4
- Low Clamping Voltage
- 450 Watts Peak Pulse Power Per Line (tp=8/20uS)
- Working Voltages:3.3V,5V,12V,15V,24V
- Protection One Power Line or I/O Port

3. IEC Compatibility

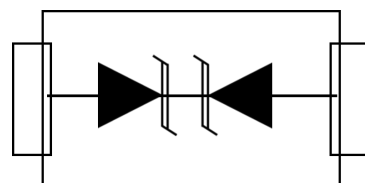
- EN61000-4
- 61000-4-2(ESD):Level 4,Contact:±30KV,Air:±30KV
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):28A(3.3V),8/20us

4. Mechanical Characteristics

- Molded JEDEC SOD-323 Package
- Packing: Tape and Reel
- Flammability Rating UL 94V-0
- Halogen Free
- JEDEC MSL Classification :Level 1



SOD323



5. Device Characteristics

Maximum Ratings@25°C Unless Otherwise Specified

Parameter	Symbol	Value	Units
Peak Pulse Power (tp=8/20us) see fig 1.	P_{PP}	450	Watts
ESD Voltage (HBM Waveform Per IEC 61000-4-2)	V_{ESD}	30	KV
Operating Temperature	T_J	-55 ~ +150	°C
Storage Temperature	T_{STG}		



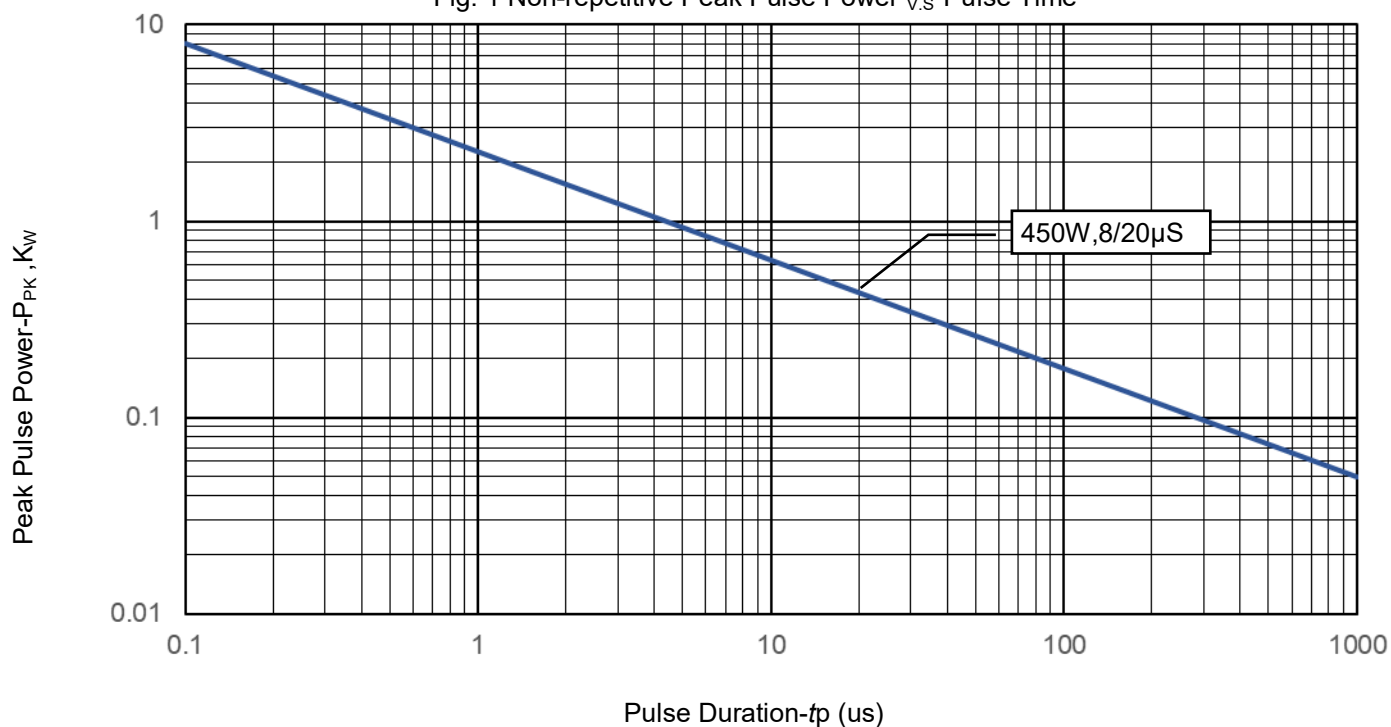
6. Electrical Characteristics

Electrical Characteristics per line @25°C Unless Otherwise Specified

Part No.	Rated Stand-off Voltage V_{RWM} (Volts)	Minimum Breakdown Voltage @1mA $V_{(BR)}$ (Volts)	Maximum Clamping Voltage @ $I_{PP}=1A$ V_C (Volts)	Peak Pulse Current @8/20us I_{PP} (A)	Maximum Leakage Current @ V_{RWM} I_R (μA)	Maximum Capacitance @0V,1MHz C_J (pF)
FSD03C	3.3	5.2	6.9	28	15	200
FSD05C	5.0	6.0	9.8	24	10	175
FSD08C	8.0	8.0	12.5	20	1	150
FSD12C	12.0	13.3	18.5	17	1	50
FSD15C	15.0	16.7	24.0	12	1	40
FSD24C	24.0	26.7	34.0	7	1	40

7. Rating and Characteristic Curve

Fig. 1 Non-repetitive Peak Pulse Power v_s Pulse Time



7. Rating and Characteristic Curve

Fig. 2 Power Derating Curve

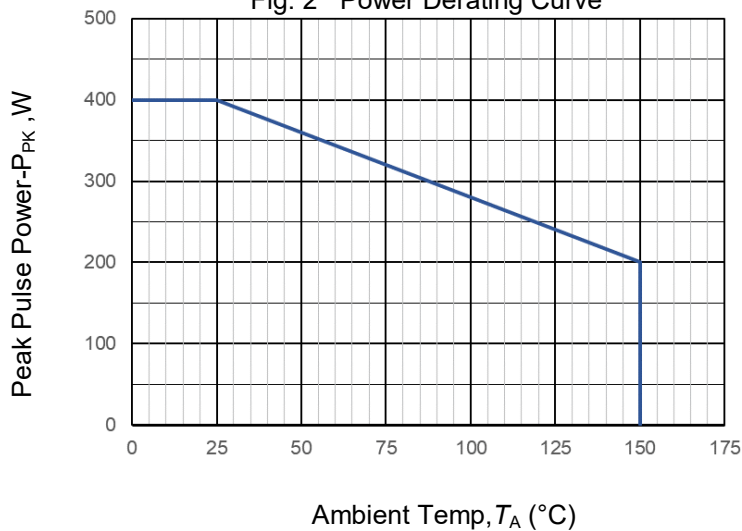


Fig. 3 Pulse Wave Form

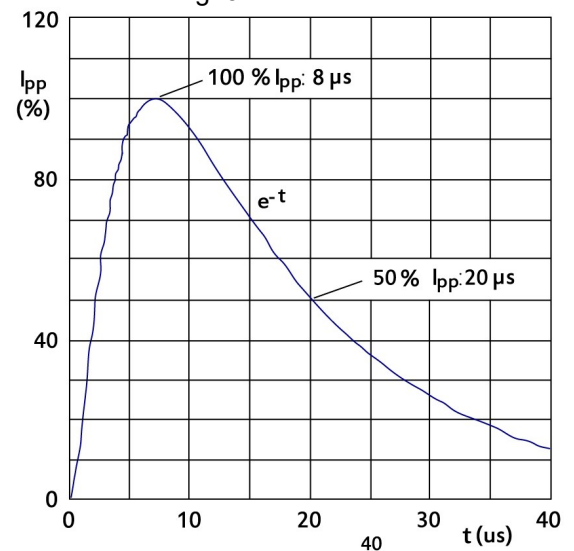


Fig. 4 Clamping Voltage V_C Map(I)

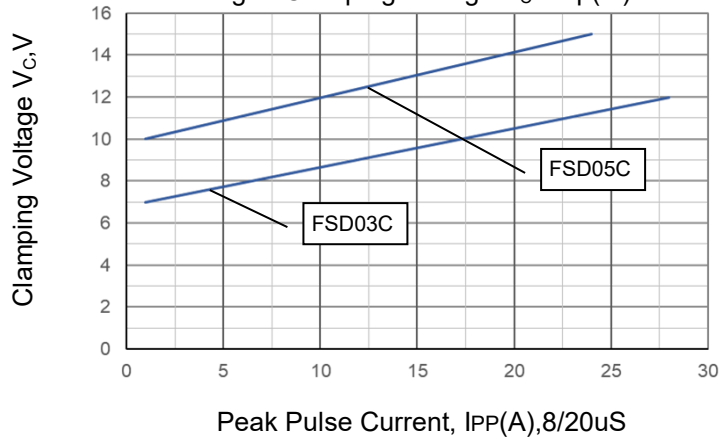
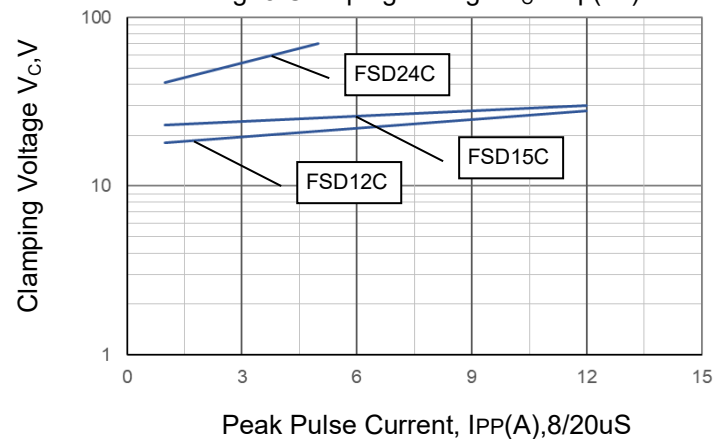
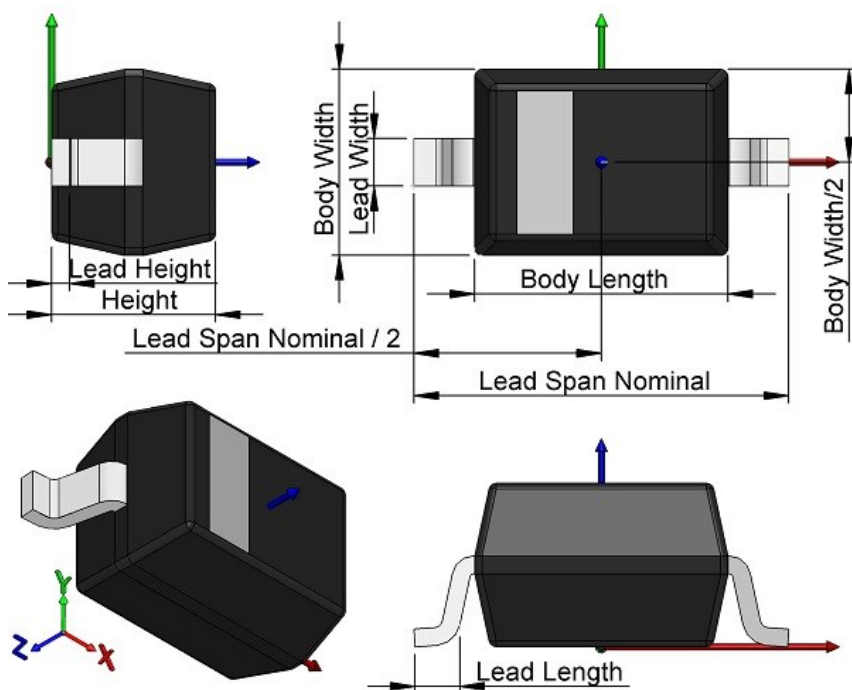


Fig. 5 Clamping Voltage V_C Map(II)



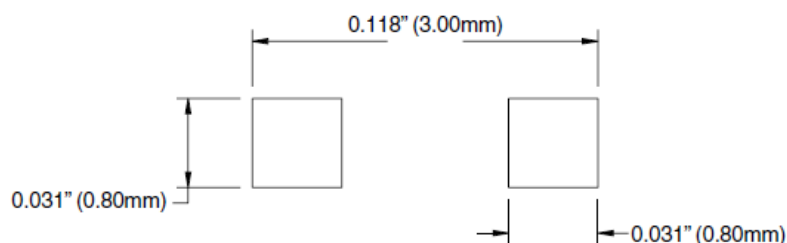
8. Package Information



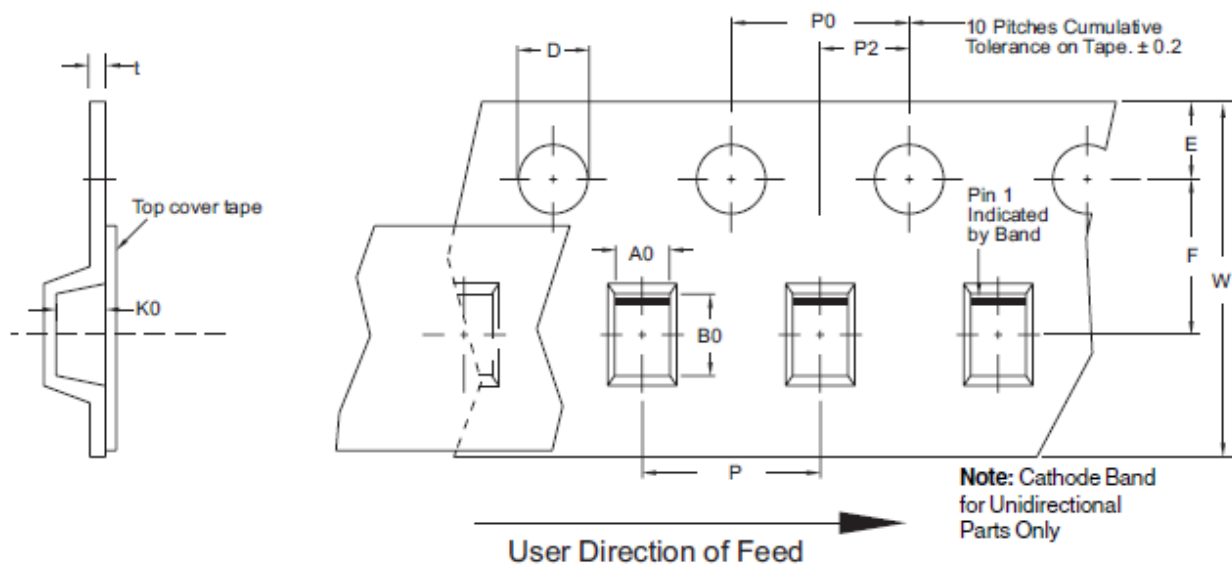
Package dimensions

DIM	Millimeters	
	Min	Max
Body Length	1.60	1.90
Body Width	1.15	1.45
Lead span nominal	2.39	2.70
Height	0.80	1.10
Lead Width	0.25	0.40
Lead Height	0.10	0.20
Lead Length	0.20	0.40

9. Mounting Pad



10. Tape & Reel Information



Reel Dia.	Tape width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm	8mm	1.55 ± 0.1	2.9 ± 0.1	1.35 ± 0.1	1.5 ± 0.1	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.3	4.0 ± 0.1	2.0 ± 0.05	4.0 ± 0.1	0.25

11. Ordering Information

Part No.	Package	Shipping	Reel Size
FSD03C	SOD-323	3,000pcs/ Tape@Reel	7"
FSD05C			
FSD08C			
FSD12C			
FSD15C			
FSD24C			

12. Marking code

Part No.	FSD03C	FSD05C	FSD08C	FSD12C	FSD15C	FSD24C
Marking						

13. History

Version	Date	File No.	Recording	Basis
A	11-Feb-2018	F118065	New Create	Market
B	23-Mar-2019		Update Company Information	System
C	23-Sep-2019		Update Thickness	Engineer
D	02-Aug-2020		Add New Item	Engineer
2.0	20-Mar-2021		Update Version	System
2.1	13-Jul-2021		Upgrade Performance	Engineer