

STANDARD CAPACITANCE TVS ARRAY

Description

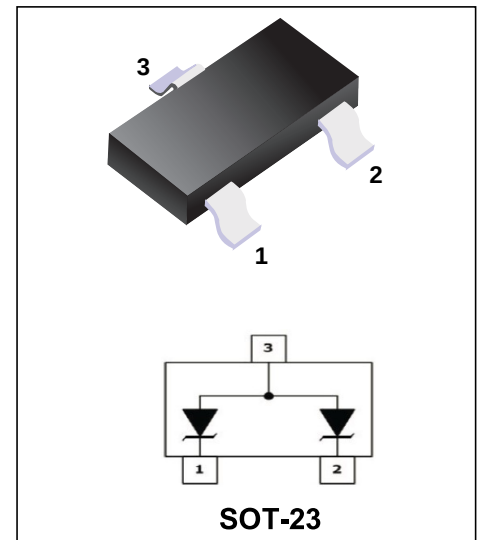
The SMxx Series is designed for applications requiring transient over voltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

Features

- ♦IEC61000-4-2(ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ♦IEC61000-4-4(EFT) 40A(5/50ns)
- ♦350Watts Peak Pulse Power per (tp=8/20us)
- ♦Protects one bidirectional line or two unidirectional lines
- ♦Low clamping voltage
- ♦Working voltages: 3.3 to 36V
- ♦Low leakage current

Mechanical Data

- ♦Case: SOT-23
- ♦Flammability Rating: UL 94V-0
- ♦High temperature soldering guaranteed: 260°C/10s



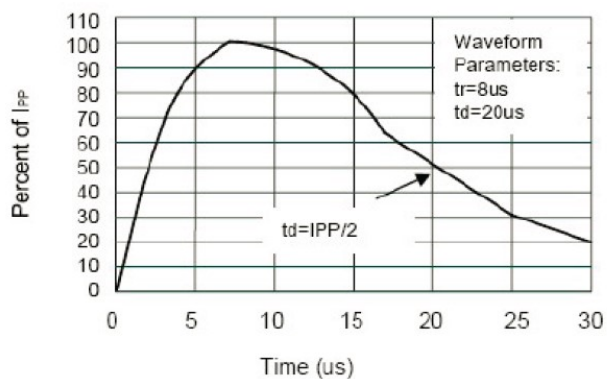
ABSOLUTE MAXIMUM RATING

Parameters	Symbols	Value	Units
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V_{ESD}	± 15 ± 8	KV
Peak Pulse Power (8/20us)	P_{PP}	350	W
Operating temperature	T_{OPT}	-55+150	°C
Storage temperature range	T_{STG}	-55+150	°C
Forward Voltage@100mA, s00us-square wave (Applies to unidirectional pins only)	V_F	1.5	V

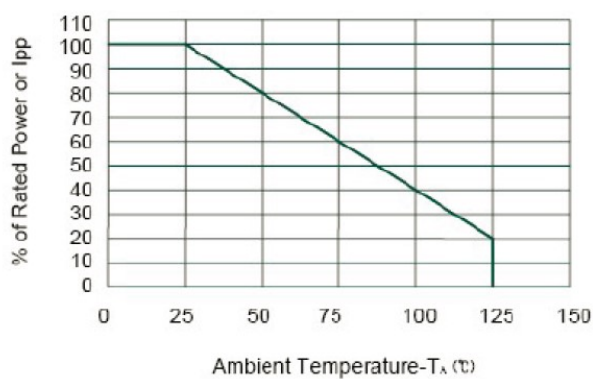
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

PART NUMBER (Note 1)	DEVICE MARKING	VRWM (V) (max.)	VB (V) (min.)	IT (mA)	Vc@1A (V) (max.)	Vc (V)		IR (uA) (max.)	CT (pF) (max.)
						(max.)	(@A)		
SM03	M03	3.3	4	1	7	10.5	20	40	450
SM05	M05	5	6	1	9.8	18	17	10	300
SM08	M08	8	8.5	1	13.4	24	15	2	240
SM12	M12	12	13.3	1	19	32	11	1	130
SM15	M15	15	16.7	1	24	38	10	1	120
SM18	M18	18	20	1	29	45	9	1	100
SM20	M20	20	22.3	1	35	50	8	1	90
SM24	M24	24	26.7	1	43	52	7	1	80
SM36	M36	36	40	1	60	75	5	1	60

ELECTRICAL CHARACTERISTICS CURVE



Pulse Waveform



Power Derating Curve

Ordering information

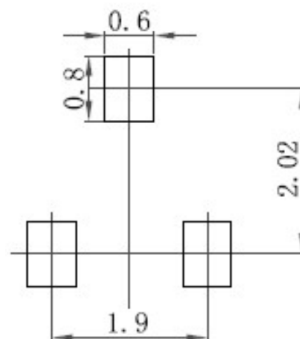
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.