# UNISONIC TECHNOLOGIES CO., LTD

# **SMAXXV**

# TVS DIODE FOR ESD PROTECTION

SOD-123

SOD-323

SOD-523

# SURFACE MOUNT SILICON ZENER DIODE

#### **DESCRIPTION**

The UTC SMAXXV is a single line TVS diode, for ESD protection.

The UTC SMAXXV is protection in portable electronics applications.

## **FEATURES**

- \* 50 Watts peak pulse power (tp=8/20µs)
- \* Transient protection for data lines to ESD=8KV (Contact) EFT=40A (tp=5/50ns) Lightning=5A (tp=8/20µs)
- \* Small package for use in portable electronics.
- \* Suitable replacement for Multi-Layer Varistors in ESD protection applications.
- \* Protects on I/O or power line.
- \* Low clamping voltage.
- \* Low leakage current.

#### **SYMBOL**

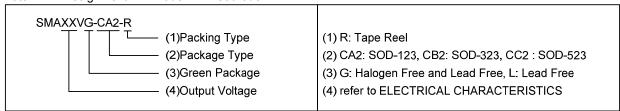




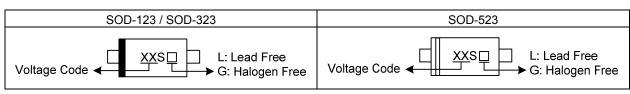
### ORDERING INFORMATION

Packing	ignment	Pin Assi	Packago	Ordering Number		
Facking	2	1	Package	Halogen Free	Lead Free	
Tape Reel	K	Α	SOD-123	SMAXXVG-CA2-R	SMAXXVL-CA2-R	
Tape Reel	K	Α	SOD-323	SMAXXVG-CB2-R	SMAXXVL-CB2-R	
Tape Reel	K	Α	SOD-523	SMAXXVG-CC2-R	SMAXXVL-CC2-R	

Note: Pin Assignment: A: Anode K: Cathode



# **MARKING**



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# ■ **ABSOLUTE MAXIMUM RATINGS** (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER			SYMBOL	RATINGS	UNIT
Peak Pulse Power (tp=8/20µs)			$P_{PK}$	50	W
Peak Pulse Current (tp=8/20µs)			$I_{PP}$	5	Α
Junction Temperature			$T_J$	-55 ~ <b>+</b> 150	°C
Storage Temperature			$T_{STG}$	-55 ~ <b>+</b> 150	°C
ESD Discharge	HEC61000-4-2	Air Discharge	$V_{ESD}$	15	kV
		Contact Discharge		8	kV

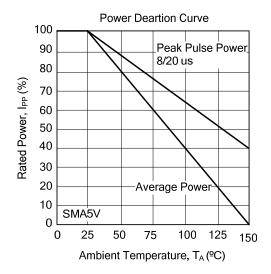
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

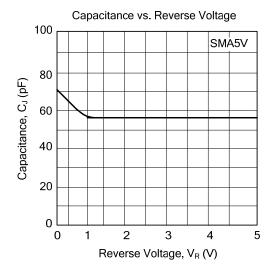
# ■ **ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C, unless otherwise specified)

(VF = 0.9V Max @ IF = 10mA for all types.)

Device	Marking Code	Test Current	Reverse Stand-Off Voltage	Reverse Breakdow n Voltage V <sub>BR</sub> (V)	Reverse Leakage Current Ι <sub>R</sub> (μΑ)		Leakage Current		Clamping Voltage V <sub>C</sub> (V)		Junctio	on Capa C <sub>J</sub> (pF)	citance
		I <sub>T</sub> (mA)	V <sub>RWM</sub> (V)	Min	Max	V <sub>RWM</sub> (V)	Max (Typ.)	I <sub>PP</sub> (A)	Max	V <sub>R</sub> (V)	f (MHz)		
SMA3V	3	1	3.3	4	20	3.3	10.9	5	100	0	1		
SMA5V	5	1	5	6	5	5	14.5	5	80	0	1		
SMA7V	7	1	7	7.5	0.15	7	22.7	8.8	85	0	1		
SMA8V	8	1	8	8.5	5	8	13	5	70	0	1		
SMA12V	12	1	12	13.3	5	12	17	5	60	0	1		
SMA15V	15	1	15	16.6	5	15	22	5	50	0	1		
SMA24V	24	1	24	26.7	5	24	32	3	25	0	1		
SMA36V	36	1	36	40	5	36	55	1	20	0	1		

## **■ TYPICAL CHARACTERISTICS**





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