

OVERVIEW

The SM6503A is the Diode array for ESD protection. 5 circuits consisted of diode element are integrated into ultra-small 6 pin plastic package. It is the most appropriate to protect the external interface circuit of portable equipment which requires miniaturization from ESD.

FEATURES

- ± 12kV ESD immunity level (IEC61000-4-2 contact discharge)
- Clamp voltage: 7.5V typ.
- Low capacitance: 10pF typ.
- 5 circuits integrated into one package
- Ultra-small package
 - SM6503AD: 6-pin SON
 - SM6503AH: SOT23-6

APPLICATIONS

- Cellular phone
- PDA
- Set Top Box
- Digital Still Camera

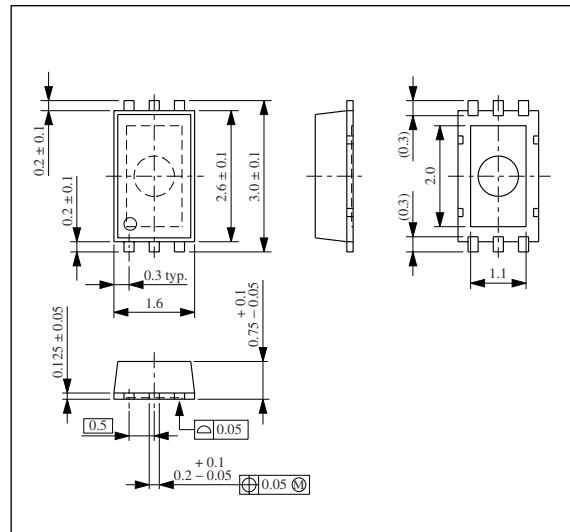
ORDERING INFORMATION

Device	Package
SM6503AD	6-pin SON
SM6503AH	SOT23-6

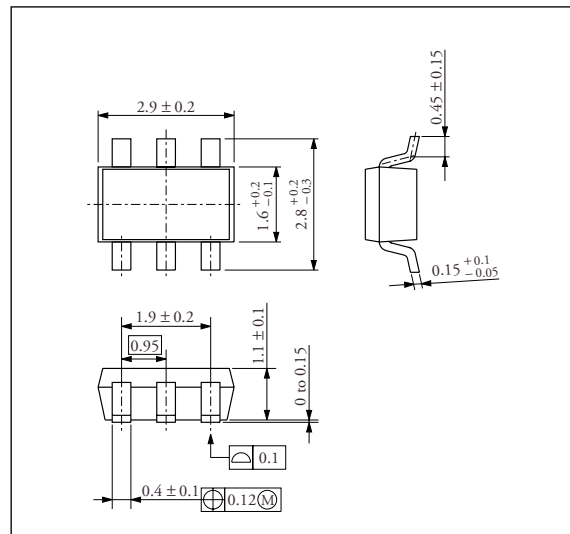
PACKAGE DIMENSIONS

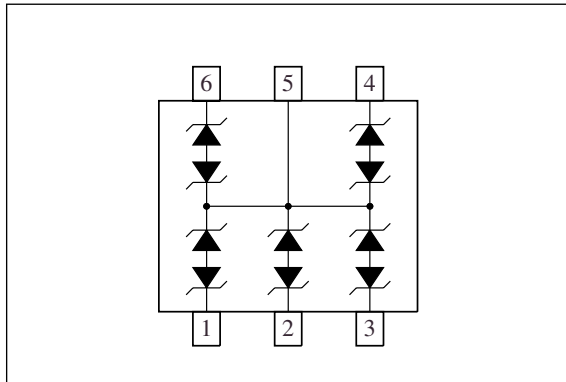
(Unit: mm)

SM6503AD (6-pin SON)



SM6503AH (SOT23-6)



PINOUT (Top view)**PIN DESCRIPTION**

Number	Name	Description
1	DIO1	Diode 1
2	DIO2	Diode 2
3	DIO3	Diode 3
4	DIO4	Diode 4
5	VSS	Ground
6	DIO5	Diode 5

SPECIFICATIONS**Absolute Maximum Ratings**

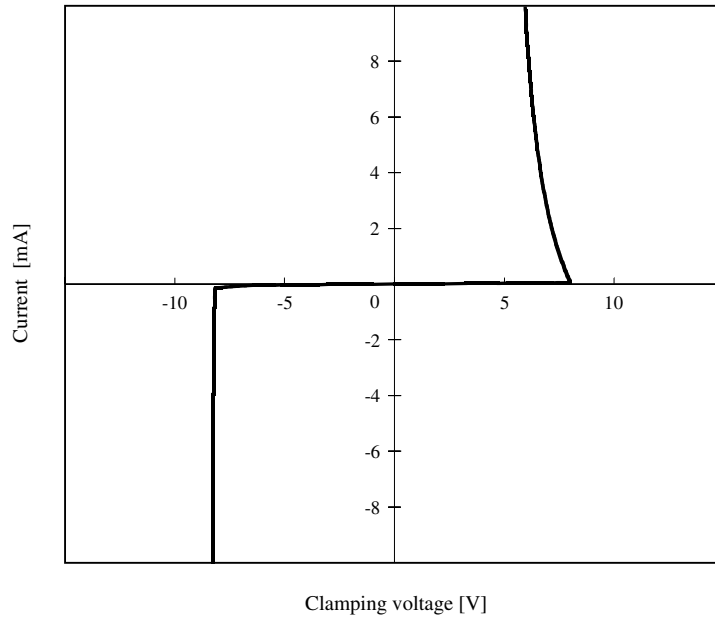
$T_a = 25^\circ\text{C}$

Parameter	Symbol	Condition	Rating	Unit
Power dissipation	P_D		220	mW
Storage temperature range	T_{stg}		- 55 to 125	$^\circ\text{C}$

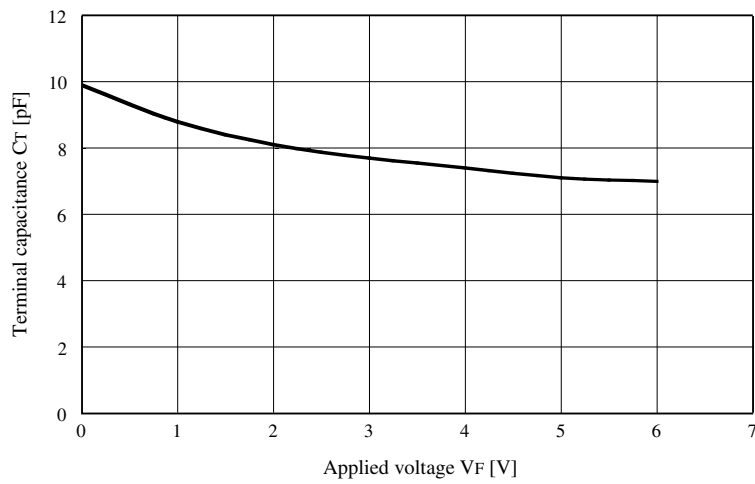
Electrical Characteristics

$T_a = 25^\circ\text{C}$

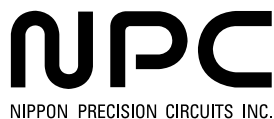
Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Diode maximum leakage current	I_{LEAK}	6V applied	-	-	1	μA
Forward clamp voltage	V_{ZF}	$I_Z = 1\mu\text{A}$	6.5	7.5	8.5	V
		$I_Z = 5\text{mA}$	-	6.5	-	V
Reverse clamp voltage	V_{ZR}	$I_Z = -1\mu\text{A}$	- 8.5	- 7.5	- 6.5	V
		$I_Z = -5\text{mA}$	-	- 8.0	-	V
Terminal capacitance	C_T	$f = 1\text{MHz}$, between DIO1 to DIO5 and VSS	-	10	-	pF
Maximum operating voltage	V_{MAX}		-	-	6	V

TYPICAL PERFORMANCE**V-I Characteristics (between DIO1 to DIO5 and VSS)****Terminal Capacitance vs. Applied Voltage**

f = 1MHz



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NIPPON PRECISION CIRCUITS INC.

4-3, Fukuzumi 2-chome, Koto-ku,
Tokyo 135-8430, Japan
Telephone: +81-3-3642-6661
Facsimile: +81-3-3642-6698
<http://www.npc.co.jp/>
Email: sales@npc.co.jp

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