RoHS

◆ Features

1.Dual function for EMI and ESD
2.Compact size for EIA 0402 and 0603
3.ESD protection for IEC61000-4-2 Level 4
4.Fixed capacitance suitable for high-speed I/O port transient voltage protection
5.RoHS Compliant

◆ Application

Applications for I/O Port for Mother Board and Notebook (RS232, USB, PS2, VGA, Audio), Set-Top Box, MP3 Players, DVD Players, and Docking System etc.

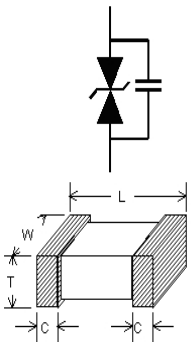
◆ How to Order

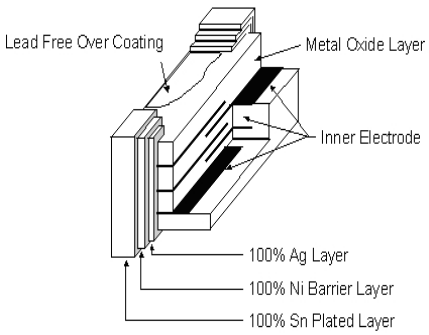
VPORT	0402	100	M	V05	☐
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series Type: V－Over Voltage Protection
PORT—EMI Protection for I/O Port
(2) Chip Size(EIA) : 0402 / 0603
(3) Capacitance : Value—XXx10^{N}→XXN
ex: 10pF=10x10^{0}→100
(4) Capacitance Tolerance : M — ±20%
(5) Working Voltage: 0402→5V
0603→5V/12V
(6) Suffix for Special Code

◆ Dimensions Unit: mm

Size EIA (EIAJ)	0402 (1005)	0603 (1608)
L	1.00±0.15	1.60±0.20
W	0.50±0.10	0.80±0.20
T	0.50±0.10	0.80±0.20
C	0.25±0.15	0.30±0.20





◆ Specifications

General Characteristics (25±5ºC)

*Description	A	B	C	D	E	F	G
Part Number	Operating Voltage (V_{DC})	Leakage Current (I_L)	Capacitance (C_p)	Clamping Voltage (V_c)	Capacitance Tolerance	Dissipation Factor	Temperature Characteristic
VPORT 0402 XXXX V05 Series							
VPORT0402100MV05	5V	<15μA	10	34	M :±20%	4.0%max.	ΔC:+15%/-15%
VPORT0402220MV05			22	30			
VPORT0402330MV05			33	28			
VPORT0402470MV05			47	26			
VPORT0402101MV05			100	23			
VPORT0402151MV05			150	22			
VPORT0402181MV05			180	22			
VPORT0402221MV05			220	20			
VPORT 0603 XXXX V05 Series							
VPORT0603100MV05	5V	<15μA	10	34	M :±20%	4.0%max.	ΔC:+15%/-15%
VPORT0603220MV05			22	30			
VPORT0603330MV05			33	28			
VPORT0603470MV05			47	26			
VPORT0603101MV05			100	23			
VPORT0603151MV05			150	22			
VPORT0603181MV05			180	22			
VPORT0603221MV05			220	20			
VPORT0603331MV05			330	19			
VPORT0603471MV05			470	19			
VPORT0603102MV05			1000	19			
VPORT 0603 XXXX V12 Series							
VPORT0603220MV12	12V	<15μA	22	42	M :±20%	4.0%max.	ΔC:+15%/-15%
VPORT0603330MV12			33	40			
VPORT0603470MV12			47	38			
VPORT0603151MV12			150	35			
VPORT0603181MV12			180	31			
VPORT0603331MV12			330	30			

***Description**

Item	Description
A	Max. Continuous Operating Voltage (V_{DC}).
B	Leakage Current (I_L). Measured at rated continuous operating voltage.
C	Capacitance (Cp) . The test condition is 1KHz(≥100pF)/1MHz (<100pF) 1Vrms±10% and the environment temperature is 25±2ºC.
D	Max. Clamping voltage (Vc). Maximum peak current across the chip with 8/20μs waveform and 1A pulse current.
E	Capacitance Tolerance. Capacitance Tolerance, M=±20%.
F	Dissipation Factor.
G	Temperature Characteristic. -30º ºC~ +85º ºC.

◆ General Technical Data

Operating Temperature	-40 ~+85℃
Storage Temperature (on board)	-40 ~ +85℃
Response Time	<1 ns
Solderability	245±5℃, 3±1sec.

◆ Environmental Performance

Item	Specifications	Test Condition
Bias Humidity	(1) I_L ≦ 15 μA at Working Voltage (2) ΔCp /Cp ≦ ±10% (3) Solder Wetting Area ≧95%	90%RH, 40℃, Working Voltage, 1000 hrs
Thermal Shock		-40℃ to 85℃, 30 min. cycle, 5 cycles
Full Load Voltage		Working Voltage, 85℃, 1000 hrs
Solder Leach Resistance		260±5℃, 10±1 sec.

◆ Package

Size EIA (EIAJ)	0402 (1005)	0603 (1608)
Standard Packing Quantity (pcs / reel)	10,000	4,000