



Features

- Dual function for EMI and ESD
- Compact size for EIA 0402 and 0603
- ESD protection for IEC6100-4-2 Level 4
- Low capacitance for high-speed transmission

Applications

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**

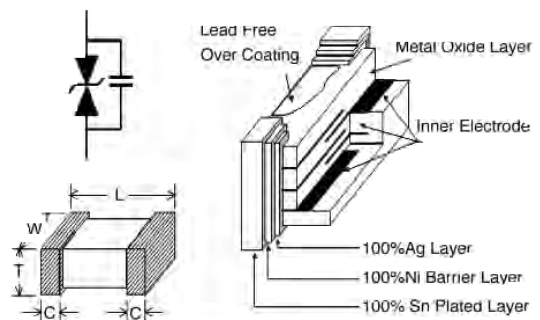
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- 1 Series Type : V—Over Voltage Protection
PORT—EMI Protection for I/O Port
- 2 Chip Size(EIA) : 0402 / 0603
- 3 Capacitance : Value—XXx10^N → XXN
ex:10pF=10x10⁰ → 100
- 4 Capacitance Tolerance : M—±20%
- 5 Working Voltage : 0402 → 5V
0603 → 5V/12V
- 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±5°C)

*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%
VPORT0402120MV05			12	34			
VPORT0402150MV05			15	32			
VPORT0402180MV05			18	32			
VPORT0402220MV05			22	30			
VPORT0402270MV05			27	30			
VPORT0402330MV05			33	28			
VPORT0402390MV05			39	28			
VPORT0402470MV05			47	26			
VPORT0402560MV05			56	26			
VPORT0402680MV05			68	25			
VPORT0402820MV05			82	25			
VPORT0402101MV05			100	23			
VPORT0402121MV05			120	23			
VPORT0402151MV05			150	22			
VPORT0402181MV05			180	22			
VPORT0402221MV05			220	20			
VPORT0402271MV05	270	20					
VPORT 0603 XXXX V05 Series							
VPORT0603100MV05	5V	<15μA	10	34	M: ±20%	4.0% max.	ΔC: +15%/-15%
VPORT0603120MV05			12	34			
VPORT0603150MV05			15	32			
VPORT0603180MV05			18	32			
VPORT0603220MV05			22	30			
VPORT0603270MV05			27	30			
VPORT0603330MV05			33	28			
VPORT0603390MV05			39	28			
VPORT0603470MV05			47	26			
VPORT0603560MV05			56	26			
VPORT0603680MV05			68	25			
VPORT0603820MV05			82	25			
VPORT0603101MV05			100	23			
VPORT0603151MV05			150	22			
VPORT0603181MV05			180	22			
VPORT0603221MV05			220	20			
VPORT0603271MV05			270	20			
VPORT0603331MV05			330	19			
VPORT0603391MV05			390	19			
VPORT0603471MV05			470	19			
VPORT0603102MV05	1000	19					
VPORT 0603 XXXX V12 Series							
VPORT0603330MV12	12V	<15μA	33	40	M: ±20%	4.0% max.	ΔC: +15%/-15%
VPORT0603390MV12			39	39			
VPORT0603470MV12			47	38			
VPORT0603151MV12			150	35			
VPORT0603181MV12			180	31			
VPORT0603331MV12			330	30			

Specifications

*Description

Item	Description
A	Max. Continuous Operating Voltage (V_{bc})
B	Leakage Current (I_l). Measured at rated continuous operating voltage.
C	Capacitance (C_p) . The test condition is 1KHz ($\geq 100\text{pF}$) /1MHz ($< 100\text{pF}$) 1Vrms $\pm 10\%$ and the environment temperature is $25\pm 2^\circ\text{C}$.
D	Max. Clamping voltage (V_c). Maximum peak current across the chip with 8/20 μs waveform and 1A pulse current.
E	Capacitance Tolerance. Capacitance Tolerance, $M=\pm 20\%$
F	Dissipation Factor.
G	Temperature Characteristic. $-30^\circ\text{C}+85^\circ\text{C}$

General Technical Data

Operating Temperature	-40... +85°C
Storage Condition	-40... +85°C
Response Time	<1 ns
Solderability	245 $\pm 5^\circ\text{C}$, 3 sec

Environmental Performance

Item	Specifications	Test Condition
Bias Humidity	$\Delta V_v / V_v \leq \pm 10 \%$	90%RH, 40°C, Working Voltage, 1000 hrs
Thermal Shock		-40°C to 85°C, 30 min. cycle, 5 cycles
High Temperature Loading		Working Voltage, 85°C, 1000 hrs
Solder Leach Resistance	(1) $\Delta V_v / V_v \leq \pm 10 \%$ (2) $I_l \leq 10\mu\text{A}$ at Working Voltage (3) Solder Wetting Area $\geq 95\%$	260°C, 10 sec.

Package

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