◆ Feature

1. Protection against high ESD voltage and current
2. Compact size for EIA 0402 and 0603
3. Extremely quick response time (<1ns)
4. Extremely low capacitance(<0.5pF)
5. Extremely low leakage current
6. Zero signal distortion
7. Bi-directional

◆ Application

1.**EGA10402V05AH、EGA10402V12A0、EGA10603 Series** are applied to RF module, Antenna circuit, IEEE-1394, USB2.0, DVI, and HDMI, DisplayPort…etc. high speed signal interface.

2.**EGA10402V05A2** is recommended to use the application of RF antenna front-end circuit without DC bias.

◆ How to Order

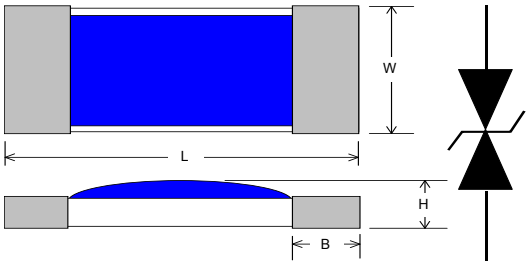
EGA	1	0603	V05	A1	-	B
(1)	(2)	(3)	(4)	(5)		(6)

(1) Series Type: ESD Guard™ Series
(2) Elements Type
(3) Chip Size(EIA): 0402/0603
(4) Rated Voltage, V_{DC}
(5) Model Code
(6) Suffix for Special Code

◆ Dimension

Unit: mm

Size EIA (EIAJ)	0402 (1005)	0603 (1608)
L	1.00±0.1	1.60±0.1
W	0.50±0.1	0.85±0.15
H	0.34±0.1	0.51±0.05
B	0.20±0.1	0.30±0.2



◆ Specification

Part Number	EGA10402V05A2[1]	EGA10402V05AH	EGA10402V12A0
Maximum Operating Voltage (V_{DC})	Without DC Bias	5V	12V
Leakage Current[2] (I_L)	Without measuring I_L	0.05μA	0.05μA
Capacitance[3], @1MHz(Cp)	0.2pF	0.2pF	0.2 pF
Trigger Voltage (Vt)	100V	150V	300V
Clamping Voltage[4] (Vc)	17V	30V	30V
ESD Voltage Capability, Contact Discharge Mode(KV)	8KV	8KV	8KV
ESD Voltage Capability, Air Discharge Mode(KV)	15KV	15KV	15KV
Minimum ESD Pulse Withstand	100	100	100

Part Number	EGA10603V05A1-B	EGA10603V12A1-B	EGA10603V24A0
Maximum Operating Voltage (V_{DC})	5V	12V	24V
Leakage Current[2] (I_L)	0.01μA	0.01μA	0.01μA
Capacitance[3], @1MHz(Cp)	0.2pF	0.2pF	0.2pF
Trigger Voltage (Vt)	150V	150V	300V
Clamping Voltage[4] (Vc)	30V	30V	30V
ESD Voltage Capability, Contact Discharge Mode(KV)	8KV	8KV	8KV
ESD Voltage Capability, Air Discharge Mode(KV)	15KV	15KV	15KV
Minimum ESD Pulse Withstand	100	100	500

Note:

1. EGA10402V05A2 is recommended to use the application of RF antenna front end circuit without DC bias.
2. Leakage current at maximum operating voltage.
3. Capacitance is measured with 1Vrms.
4. Per IEC 61000-4-2, 30A@8KV, level 4, clamp measurement made 30 ns after initiation of pulse, all test in contact discharge mode.

◆ General Technical Data

Operating Temperature	-40 ~+85℃
Storage Temperature	-55 ~ +125℃
Response Time	<1 ns
Solderability	245±5℃, 3±1sec.

◆ Environmental Performance

Item	Specifications	Test Condition
Bias Humidity	$I_L \leqq$ 10 μA	90%RH, 40℃, Rated Voltage, 1000 hrs
Thermal Shock		-40℃ to 85℃, 30 min. cycle, 5 cycles
Full Load Voltage		Rated Voltage, 85℃, 1000 hrs
Solder Leach Resistance		260±5℃, 10±1 sec.

I_L – Leakage current at rated voltage, the maximum leakage current was measured after reliability test.

◆ Package

Size EIA (EIAJ)	0402 (1005)	0603 (1608)
Standard Packing Quantity (pcs / reel)	10,000	5,000