

## SCOPE

This specification is applied to electrostatic discharge (ESD) protection. It is designed to protect the high-speed data lines against ESD transients.

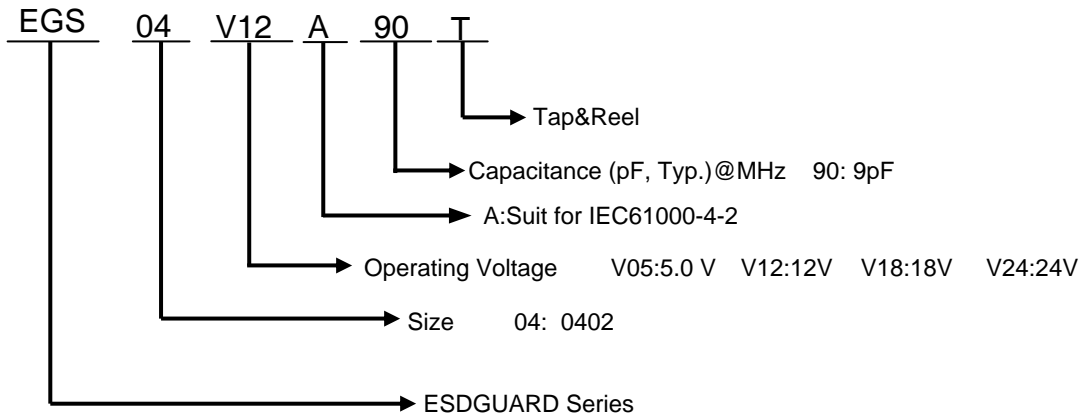
## FEATURES

- Multilayer structure
- Bi-directional ESD protection
- Quick response time (<1ns).
- Lead free solder termination
- The best ESD protection for high frequency, low voltage applications
- Meet IEC 61000-4-2,61000-4-4,and 61000-4-5 standard

## APPLICATIONS

- Application for Mother Board, Notebook, Cellular Phone, PDA, handheld device,DSC,DV,Scanner , and Set-Top Box etc.
- Data port:HDMI,USB2.0,IEEE1394,DVI etc.
- Wireless Device
- RS232,IrDA1.0
- Audio

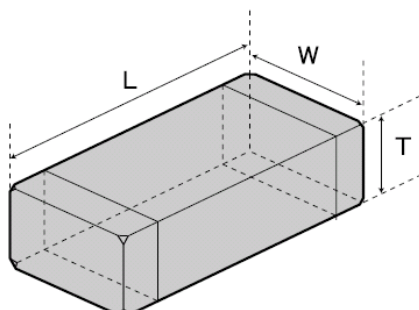
## Explanation of Part Number



## Rating and Characteristics

Type	Continuous Operating Voltage		Trigger Voltage (Typ.) <sup>2</sup>		Clamping Voltage	Capacitance (Typ.) <sup>3</sup>		Leakage Current
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)	Min	Max	V <sub>c</sub> (V) 8/20μs	C <sub>p</sub> (pF) 1MHz/1.0V	ΔC <sub>p</sub>	I <sub>l</sub> (μA)
EGS04V12A90T	8	12	27	33	24	9	±30%	<0.1

## Dimensions



CODE	DIMENSION (mm)		
	L	W	T
04	1.00±0.05	0.50±0.05	0.50±0.05

## Reliability Test

Environmental Specification	Reference Standard	Test Condition	Specification
Operating temperature		-55°C to 125°C	IL<1μA <sup>1</sup>
Full load voltage		85°C for 1000 hrs at working voltage	
Resistance of solder heat	MIL-STD-202 Method 210	260 ± 5°C for 10 ± 1 sec	
Thermal shock	MIL-STD-202 Method 107	-55°C to 125°C, 5 cycles	
Moisture resistance	MIL-STD-883, Method 1004.7	85%RH, 85°C for 1000hrs at working voltage	
Solderability	MIL-STD-202, Method 208	245 ± 5°C solder, 2 ± 0.5 sec dwell. Solder: Sn96.5/Ag3.0/Cu0.5	95% coverage

Note: 1. I<sub>L</sub> – Leakage current at maximum operating voltage, the maximum leakage current was measured at reliability test.

**Package**

SIZE EIA(EIAJ)	EGS04
Standard Packing Quantity(pcs/reel)	10000pcs

**Recommend Item for System Data I/OUsed**

Device Port	Data Rate & Frequency	Rise Time	Capactiance
HDMI	1G bps	<1ns	<0.5pF
USB2.0 Data Port	480M bps	<1ns	<4pF
Wireless Device	1.5M bps	75~300ns	5~10pF
RS232,IrDA1.0	115.2K	1ns~8ns	10~100pF
Audio	20~20KHZ	0.05ms~5ms	10~1000pF

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