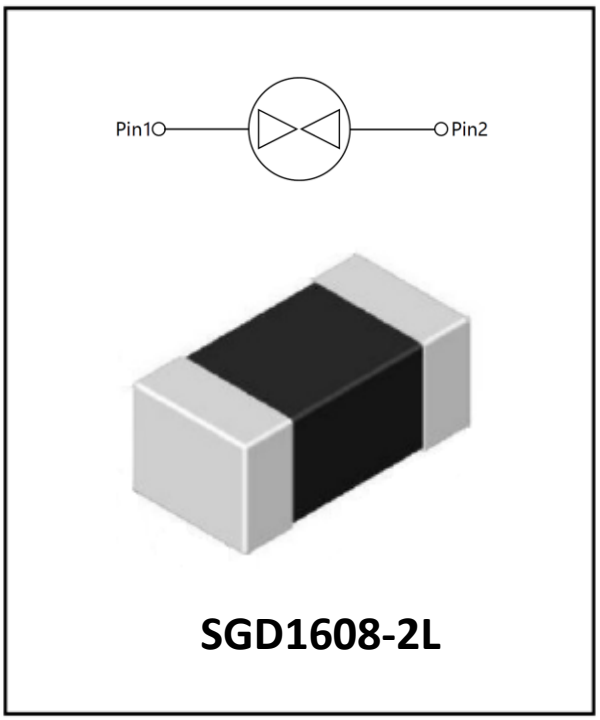
1-Line,Bi-directional, Transient Voltage Suppressor



Features

- Ultra small package
- Stand-off voltage: 24V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±25kV (air)
  IEC61000-4-2(ESD): ±15kV (contact)
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

- Smart Phone/Mobile Interment Device
- Loptop/Desktop Computer
- Antennas
- High Speed Ethernet
- Lightning and Thunder Bolt interface
- USB 2.0 and USB 3.0

Mechanical Characteristics

- Package: SGD1608-2L
- Moisture Sensitivity: Level 1 per J-STD-020
- Case Material: Glass Fiber Epoxy Resin
- Marking Information: None

■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	Value	Units
Response time	Trise	<0.5	ns
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±25	kV
ESD according to IEC61000-4-2 contact discharge		±15	
Operation ambient temperature	T_{OPT}	-55~+125	℃
Storage temperature range	T_{STG}	-55~+150	℃

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

Part No.	Working Voltage	Typical ESD Trigger Voltage	Typical ESD Clamping Voltage at 60ns	Leakage Current (at Initial State)	Leakage Current (after ESD Test)	Cap. Value at 1MHz (typ)	Cap. Value at 1MHz (max)
Symbol	VDC (max)	Vtrigger (typ)	VC (typ)	ILDC	ILDCA	Cj (typ)	Cj (max)
Unit	V	V	V	μA	μA	pF	pF
ESDM6V0M2	6	300	30	＜0.1	＜0.1	0.05	0.08
ESDM12VM2	12	300	30	＜0.1	＜0.1	0.05	0.08
ESDM24VM2	24	300	30	＜0.1	＜0.1	0.05	0.08

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDM6V0M2~ ESDM24VM2	Approximate 1.53	5000	50000	200000	Tae& reel

■ESD Testing Circuit and Testing Results

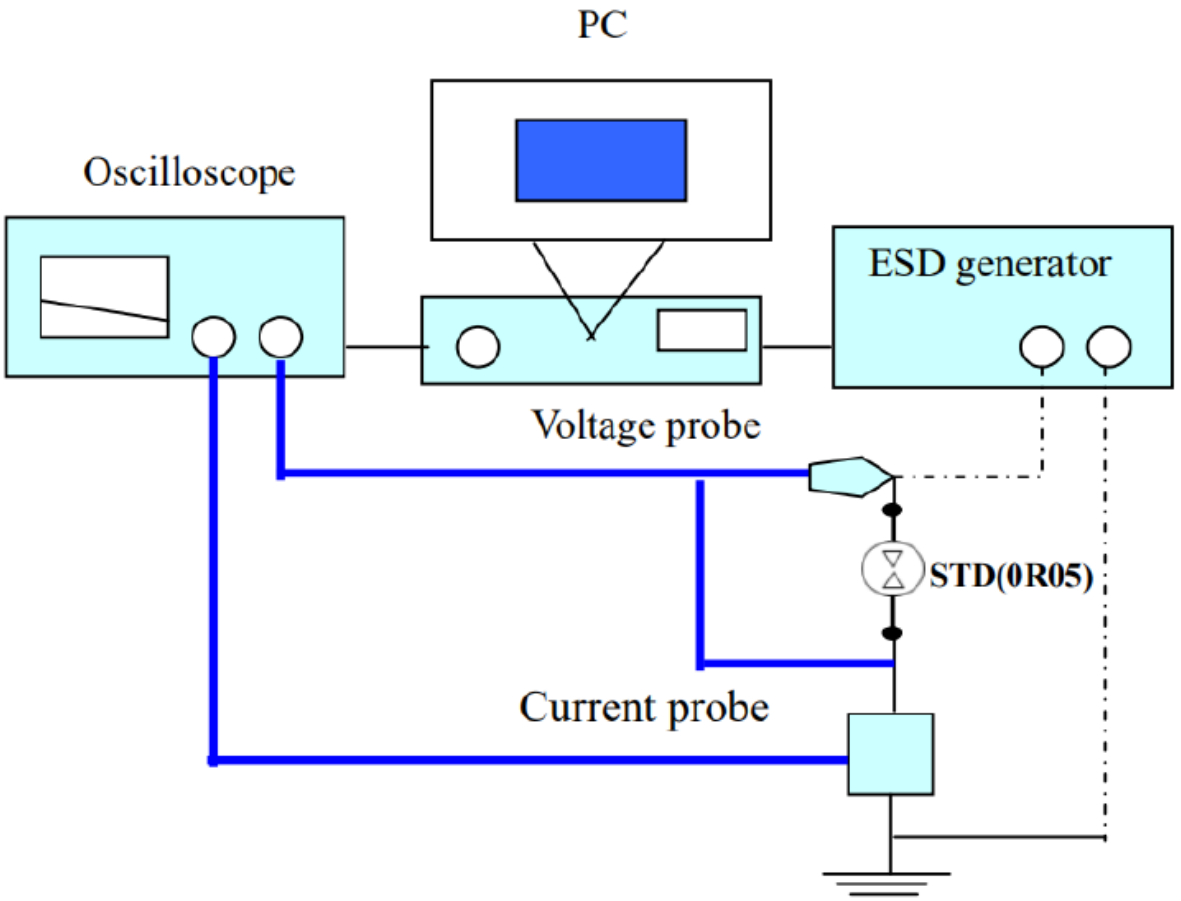
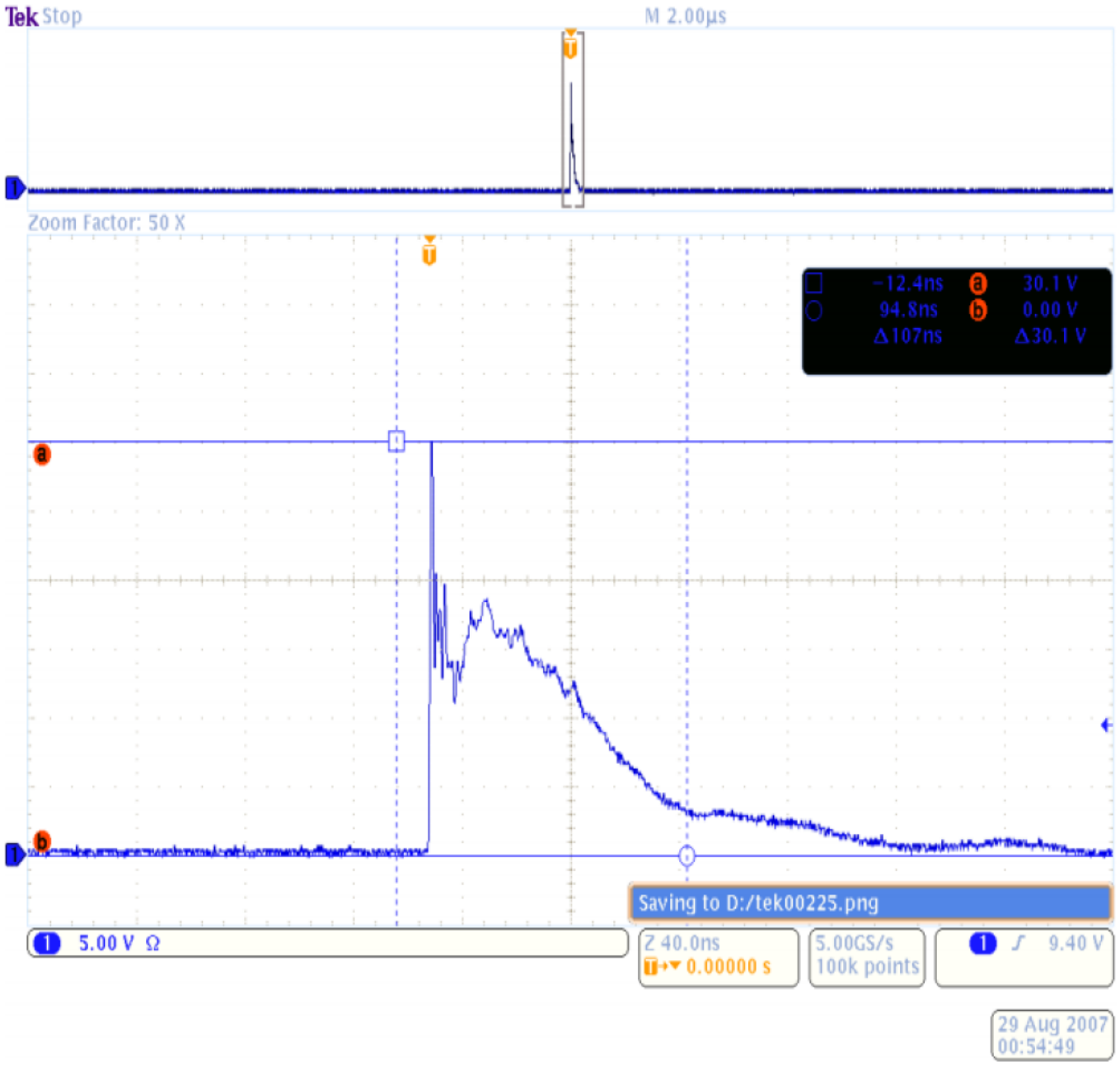


Fig 2 (A) ESD testing circuit



Test with high voltage probe of attenuation factor ×250
Fig 2 (B) without ESD protection sample

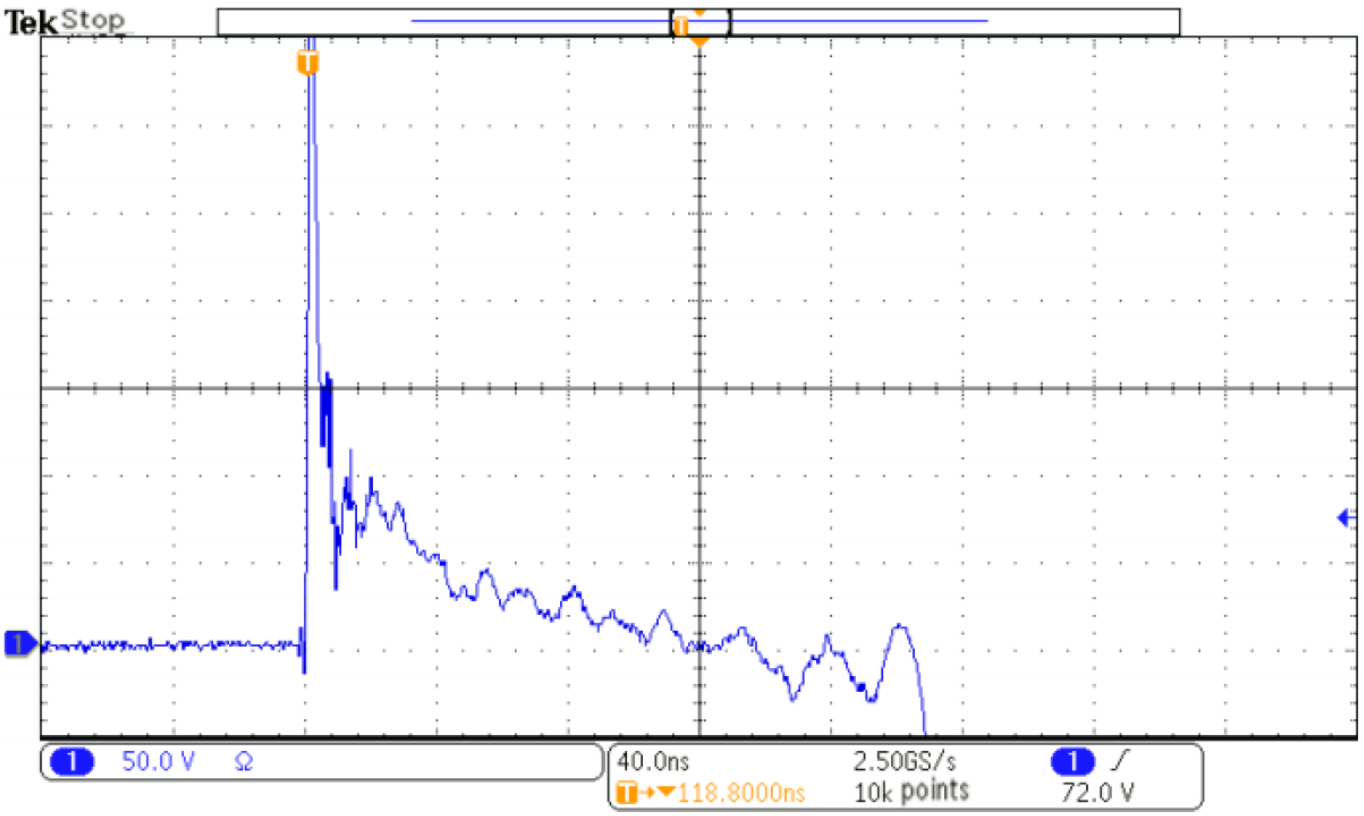


Fig 2 (C) with ESD protection sample

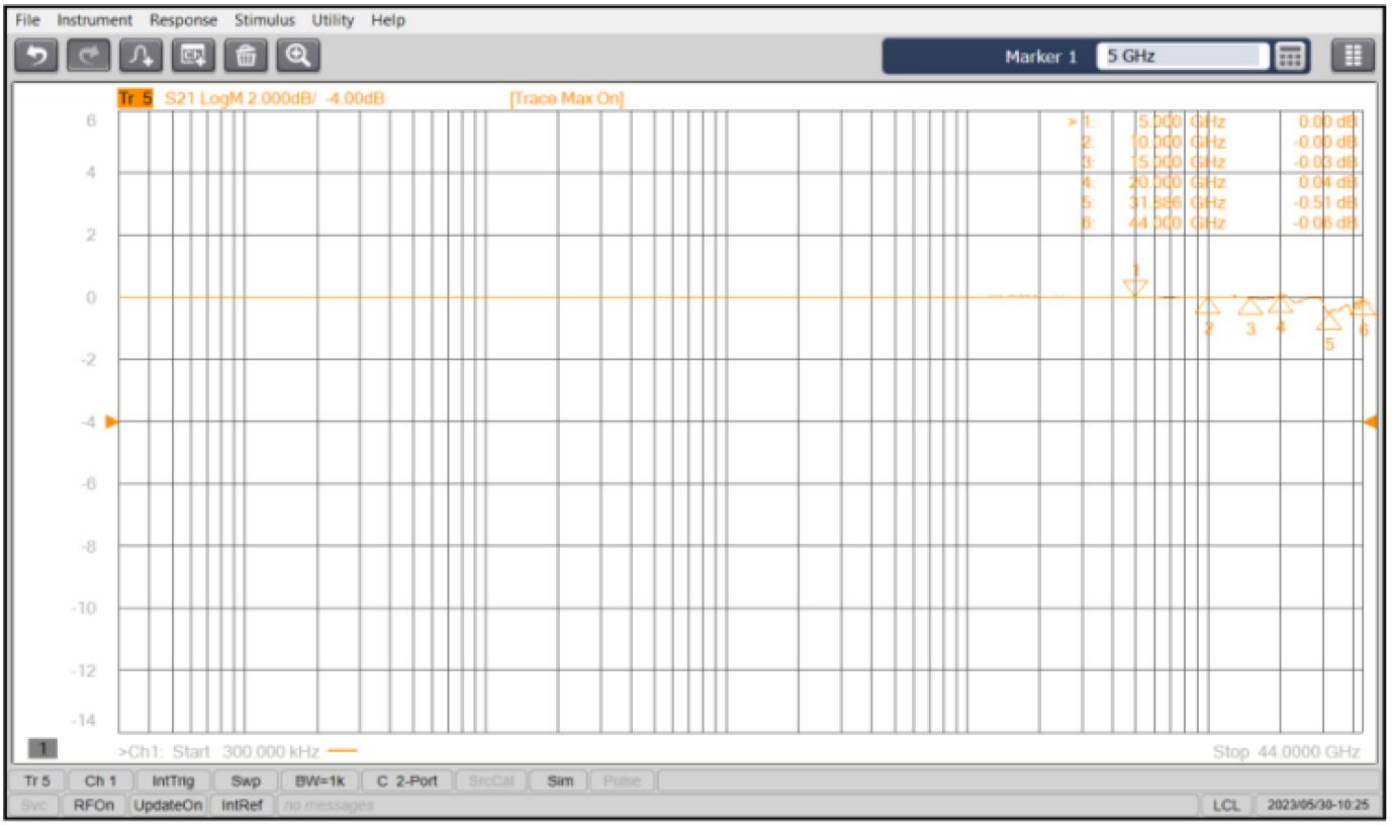


Fig 3(A) Insertion loss

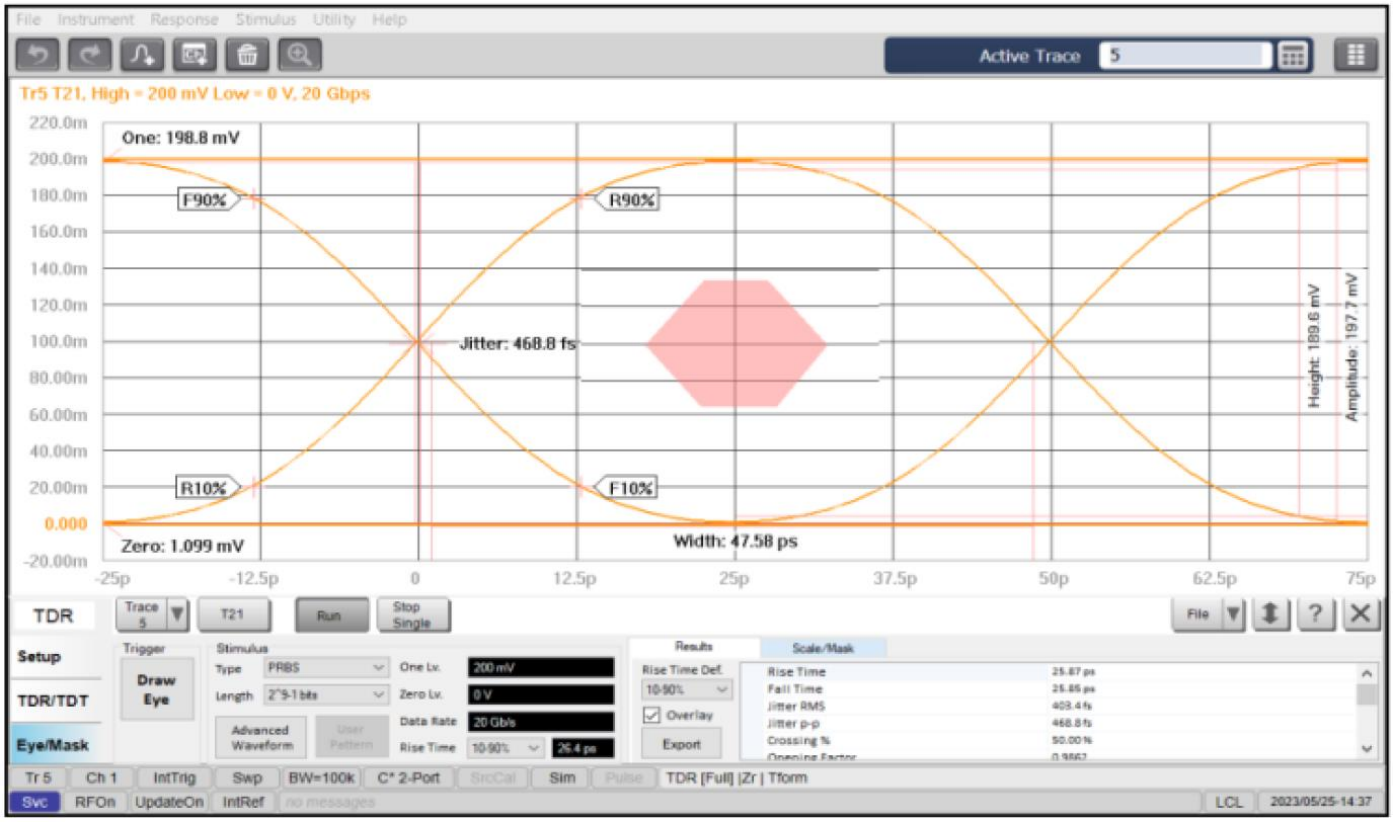
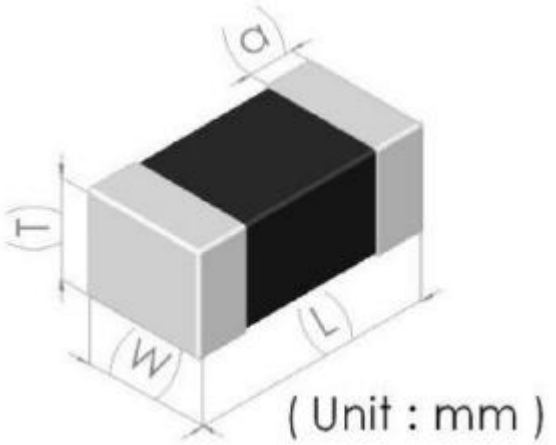


Fig 3(B) Eye pattern

■ Outline Dimensions

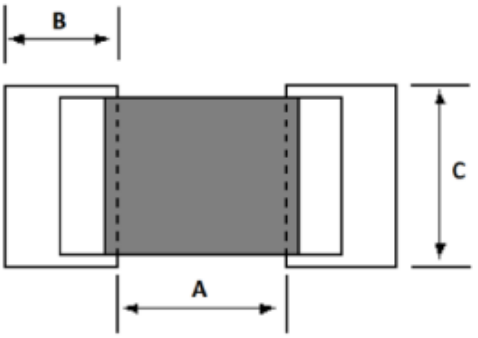
Model	SGD1608
Length (L)	1.60±0.10
Width (W)	0.80±0.10
Thickness (T)	0.60±0.10
Termination (a)	00.30±0.10



■ Recommend land pattern (Unit:mm)

(Unit:mm)

	A	B	C
0603	0.9~1.2	0.9~1.2	0.8~1.0



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