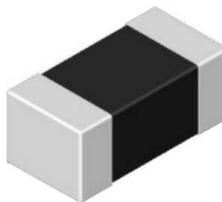


Features

- Small package, 1.0 x 0.60 x 0.5mm
- Ultra low capacitance
- Operating voltage: 6V, 12V, 24V, 30V
- Complies with following standards:
 IEC 61000-4-2 (ESD) immunity test
 Air discharge: ±25KV
 Contact discharge: ±15KV



0402



Schematic Diagram

Performance Characteristics

Parameter	Working Voltage	TLP Trigger Voltage	Typical ESD Clamping Voltage at 60ns ¹	Leakage Current (at Initial State) ²	Leakage Current (after ESD Test)	Cap. Value at 1MHz (typ)	Cap. Value at 1MHz
Symbol	V_{DC} (max.)	$V_{trigger}$ (typ.)	V_C (typ.)	I_{LDC}	I_{LDCA}	C	C_{max}
Unit	V	V	V	μA	μA	pF	pF
GSECB06B0005	6	350	30	<0.1	<1.0	0.05	0.08
GSECB12B0005	12	350	30	<0.1	<1.0	0.05	0.08
GSECB24B0005	24	350	30	<0.1	<1.0	0.05	0.08
GSECB30B0005	30	350	30	<0.1	<1.0	0.05	0.08

Reference Data

Parameter	Symbol	Value	Units
Response Time	T_{rise}	<0.5	ns
Operation Ambient Temperature Range	T_{OPT}	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Complies With Standard	ESD	IEC 61000-4-2 Level 4 and ±15KV Contact, ±25KV Air	-
Body	-	Glass Fiber Epoxy Resin	-
End Termination	-	Ag/Ni/Sn	-

Notes:

1. The maximum ESD clamping voltage at 30ns can be within 100V.
2. The leakage current was measured at V_{DC} .

ESD Testing Circuit and Test Results

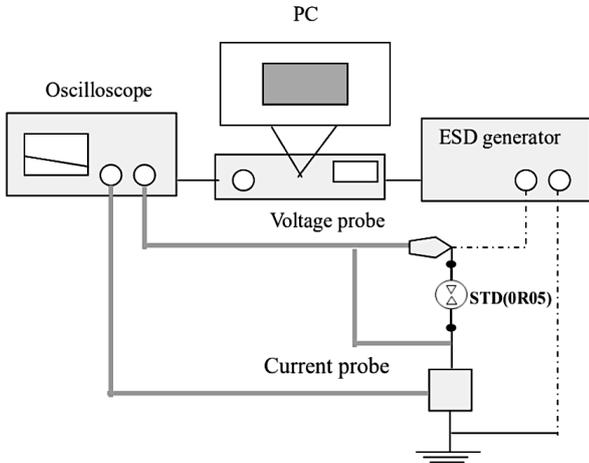
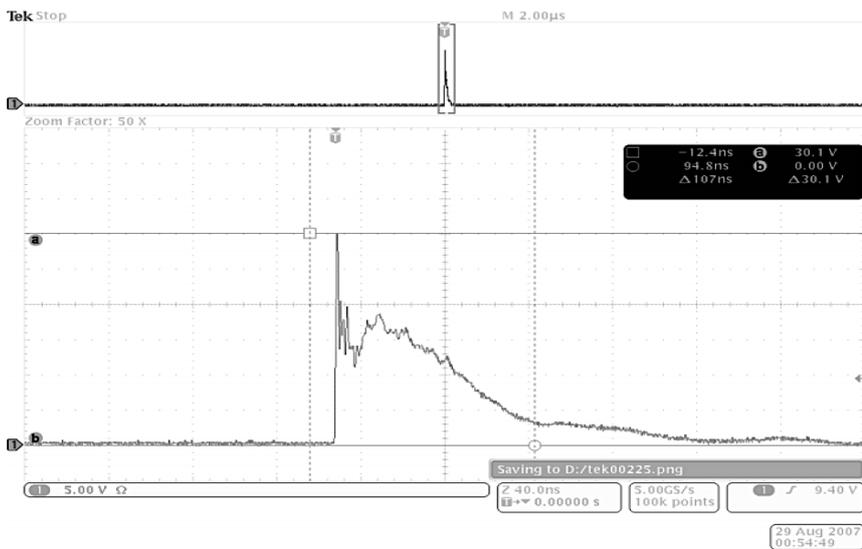


Figure 1. ESD Testing Circuit



Test with High Voltage Probe of Attenuation Factor $\times 250$

Figure 2. without ESD Protection Sample

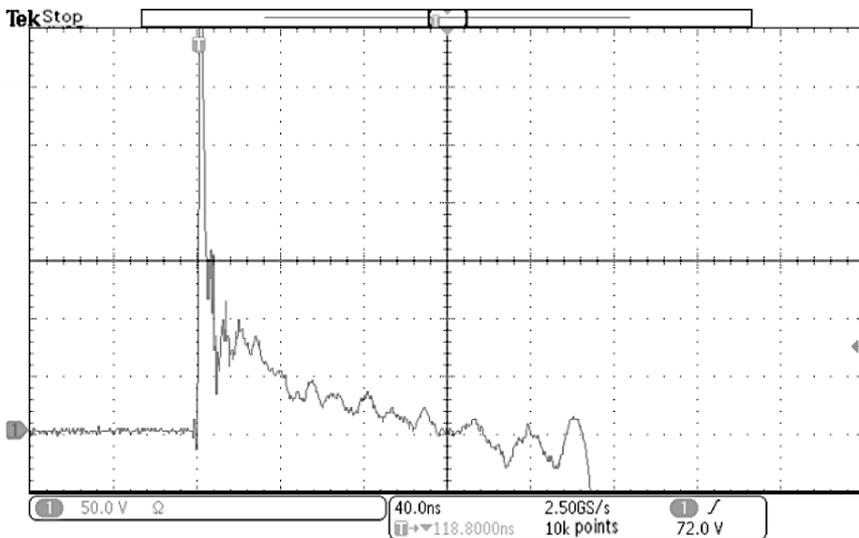


Figure 3. with ESD Protection Sample

Insertion Loss and Eye Pattern (20Gbps) Testing Results

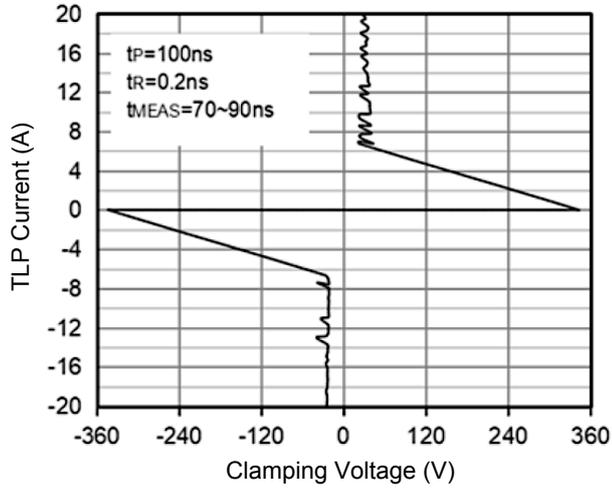


Figure 4. TLP Measurement

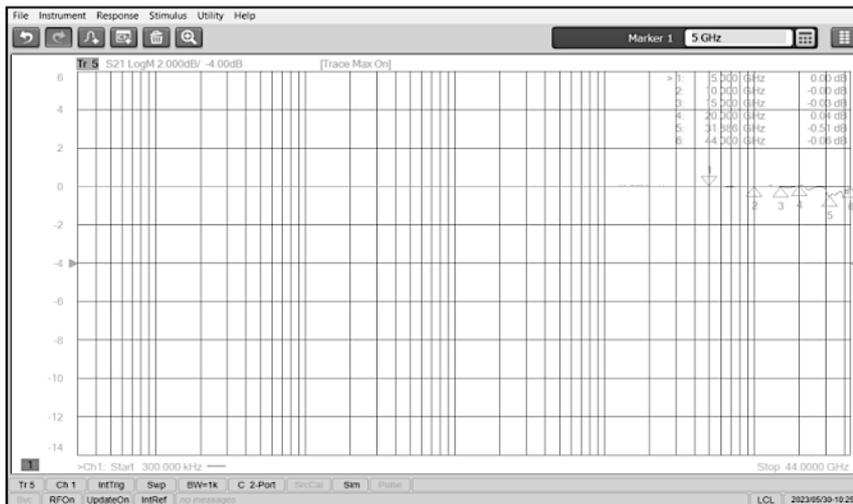


Figure 5. Insertion Loss

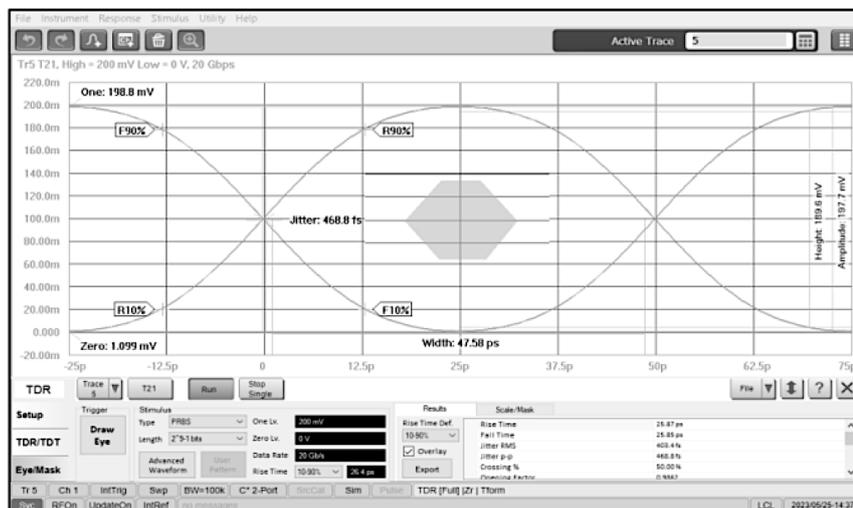
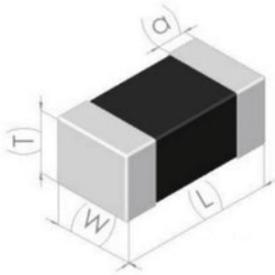


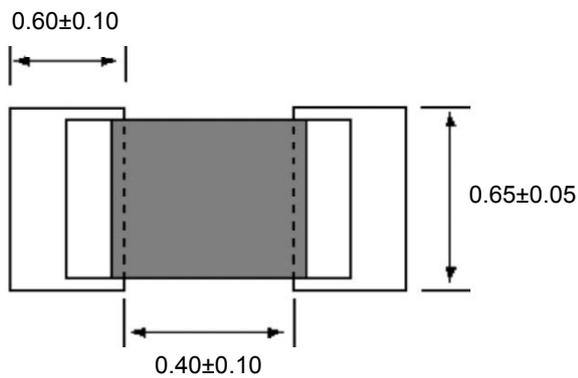
Figure 6. Eye Pattern

Package Outline Dimensions (0402)



Dimensions	Spec. In Millimeters
Length (L)	1.00±0.10
Width (W)	0.60±0.10
Thickness (T)	0.50±0.10
Termination (a)	0.25±0.10

Recommended Pad Layout



Unit: Millimeters

Order Information

Device	Package	Marking	Packaging	SPQ
GSECB06B0005	0402	No Marking	Tape & Reel	10,000 Pcs / Reel
GSECB12B0005	0402	No Marking	Tape & Reel	10,000 Pcs / Reel
GSECB24B0005	0402	No Marking	Tape & Reel	10,000 Pcs / Reel
GSECB30B0005	0402	No Marking	Tape & Reel	10,000 Pcs / Reel