



ESD Protection Diodes with Ultra-Low Capacitance

Specification Features:

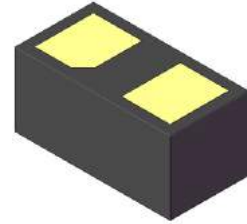
- Ultra Low Capacitance 3 pF
- Low Clamping Voltage
- Small Body Outline Dimensions:
(0.61 mm x 0.31 mm)
- Low Body Height: 0.28 mm
- Stand-off Voltage: 5 V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000-4-2 Level 4 ESD Protection
- This is a Pb-Free Device

Mechanical Characteristics:

CASE: Void-free, transfer-molded, thermosetting plastic Epoxy
Meets UL 94 V-0

LEAD FINISH: 100% Matte Sn (Tin)

DFN0603-D



PIN CONFIGURATION



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact Air		±10 ±15	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T _A = 25°C	P _D	200	mW
Storage Temperature Range	T _{stg}	-55 to +150	°C
Junction Temperature Range	T _J	-55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C

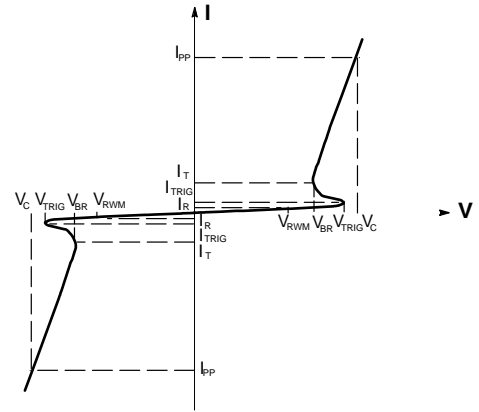
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0 x 0.75 x 0.62 in.



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse stand-off voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
V_{TRIG}	Reverse trigger voltage
I_{TRIG}	Reverse trigger current



Bi-Directional TVS

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Device	Device Marking	V_{RWM} (V)	I_R (uA) @ V_{RWM}	V_{BR} (V) @ $I_T = 1\text{mA}$ (Note 2)		C (pF)		V_C (V) @ $I_{PP} = 3.5\text{A}$ (Note 3)	I_{PP} (A) $t_p = 8/20\mu\text{s}$	P_{PP} (W)	V_C
		Max	Max	Min	Max	Typ	Max	Max	Max	Max	Per IEC61000-4-2 (Note4)
ESD2D5V0B1L040L	C	5.0	1	5.5	9.6	2.7	3.5	11.5	3.5	40	Figures 1 and 2 See Below

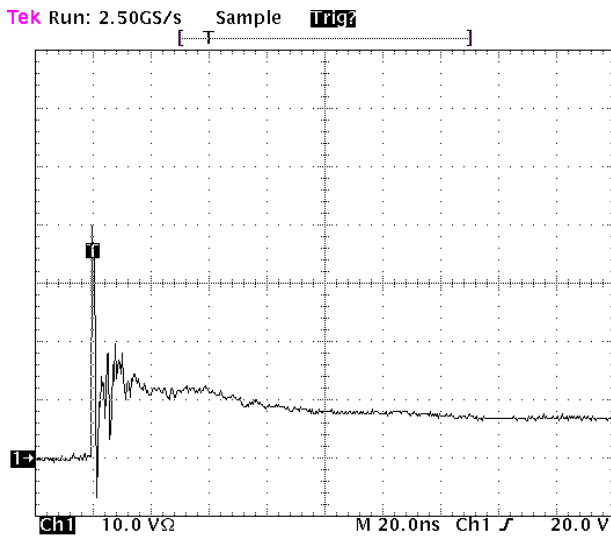


Figure 1. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

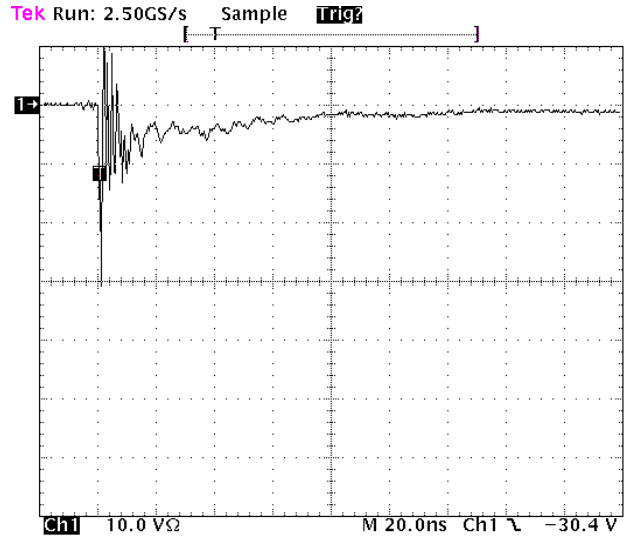


Figure 2. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2



IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

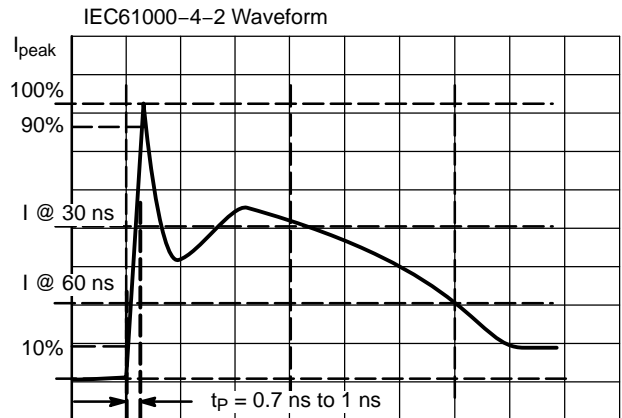


Figure 3. IEC61000-4-2 Spec

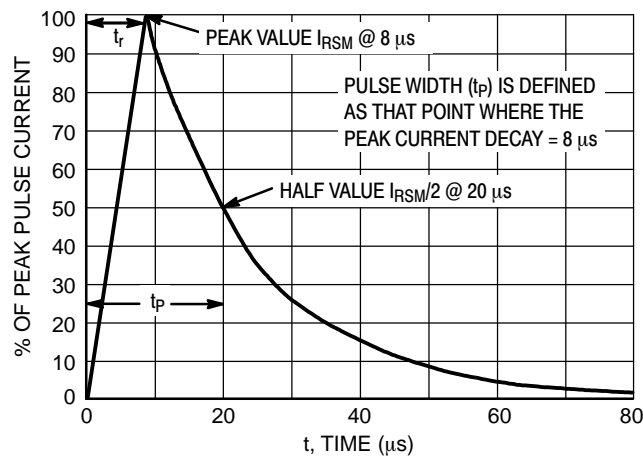


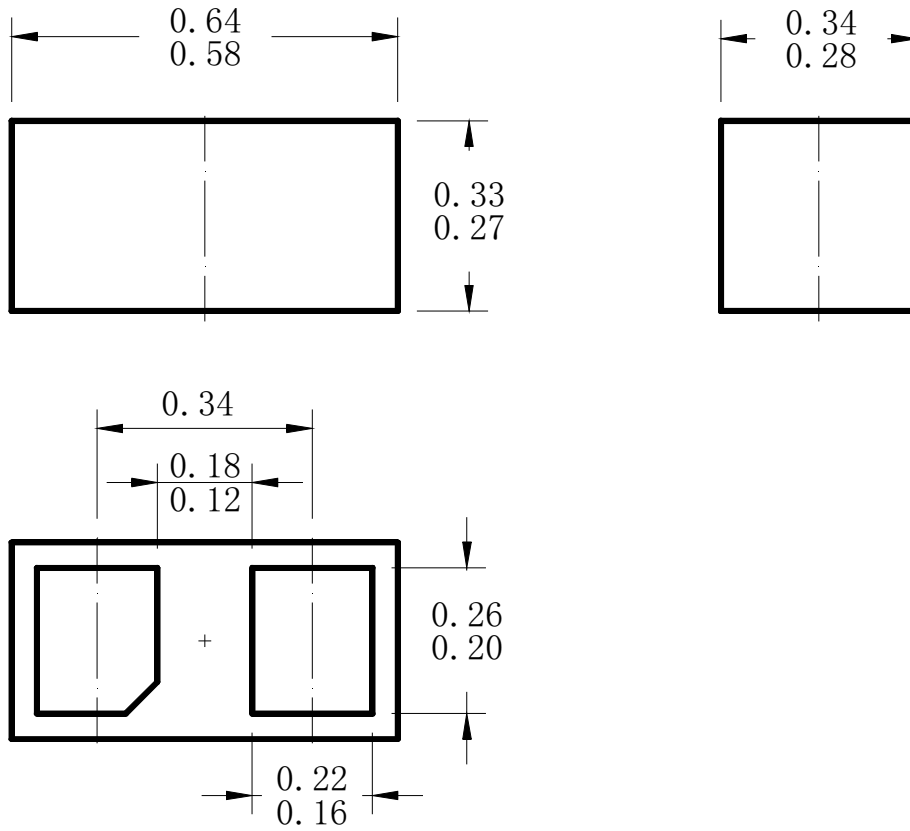
Figure 4. 8 X 20 µs Pulse Waveform



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DIMENSION OUTLINE:

Unit:mm



Soldering Footprint

