

Overview

AMODIODE is a component which acts as a non-conductor on the circuit in normal circumstances. When over-voltage is loaded, it becomes a conductor which diverts over-current from circuits to ground at critical voltage level.

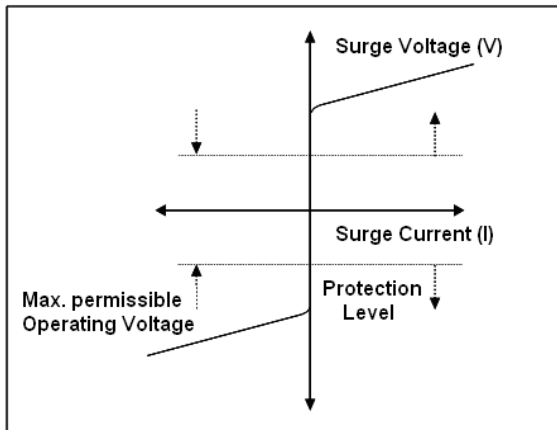


Fig 1 V-I Characteristic Curve

Features

- Lead free
- Multilayer laminated structure
- IEC 61000-4-2 (ESD) level #4
- Low capacitance
- Ideal for high speed data applications
- High reliability over multi surge
- Forward & Reverse(+, -) direction property
- Low leakage current and inductance
- Easy to control electric capacity
- Excellent reliability against ESD

Applications

- Antenna switch protection
- SAW filter protection
- USB 2.0 protection (Full, High speed)
- HDMI protection

Model Description

ADUC	10	S	03	1R1
(1)	(2)	(3)	(4)	(5)

- (1) Series name : "ADUC" – AMODiode Ultra low Capacitance type
- (2) Maximum continuous working voltage (Vdc) : "5"-5V, "10" - 10V
"18"-18V, "30"-30V
- (3) Breakdown voltage tolerance : "S" - special order
- (4) Chip size : **03** means 06**03** (1.6 x 0.8 mm)
- (5) Capacitance : 1R1 means 1.1 pF, 1R5 means 1.5pF, 3R3 means 3.3pF
005 means 5pF, 010 means 10pF, 200 means 200pF

Electrical characteristics

Part No.	Vdc ⁽¹⁾	Breakdown Voltage (Vn) @1mA DC	Capacitance (Cp) @ 1MHz, 0.5Vrms	Leakage Current (IL) @ Vdc	Insulation Resistance (IR) @3V
	(V)	(V)	(pF)	(uA)	(MΩ)
ADUC 10S 03 1R1	10	70 (49~91)	1.1 (0.8~1.4)	20	10 min
ADUC 30S 03 010	30	50min	10 (7~13)	10	10 min

(1) Maximum continuous DC working voltage

(2) Vn measuring source of ADUC10S031R1 is 0.1mA.

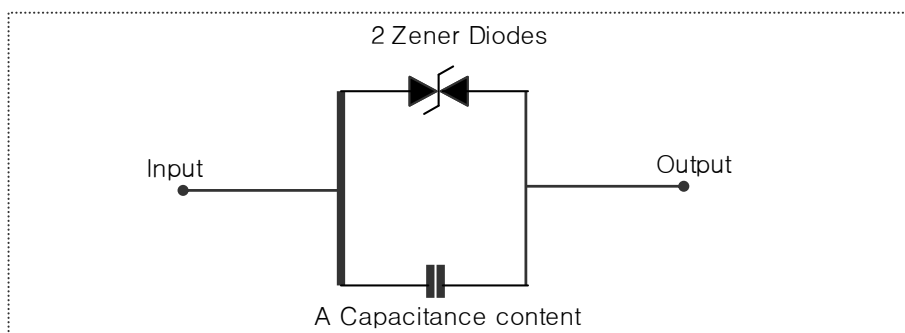
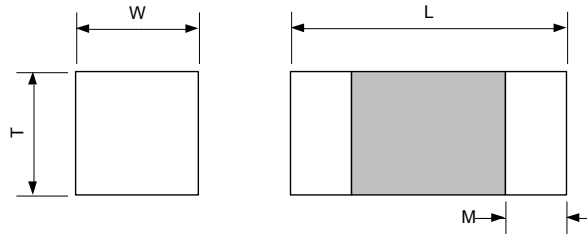


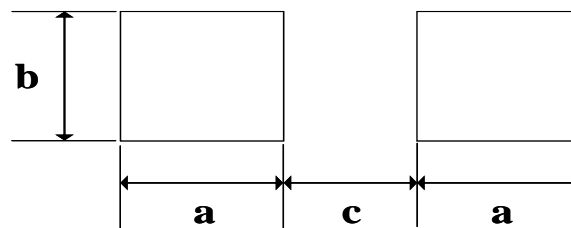
Fig.2 Equivalent Circuit

Appearance



Symbol	L	W	T	M
Size (mm)	1.6 ± 0.15	0.8 ± 0.15	Max. 0.9	0.35 ± 0.15

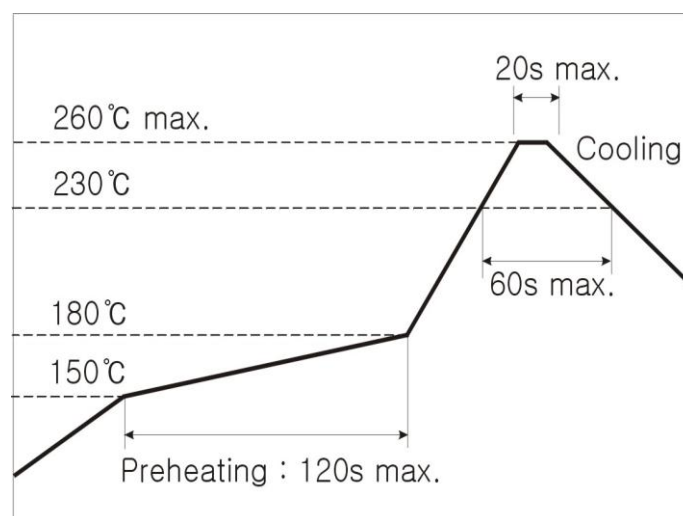
Recommended Land pattern (Typical Dimensions)



Symbol	a	b	c
Size (mm)	0.9	0.8	0.8

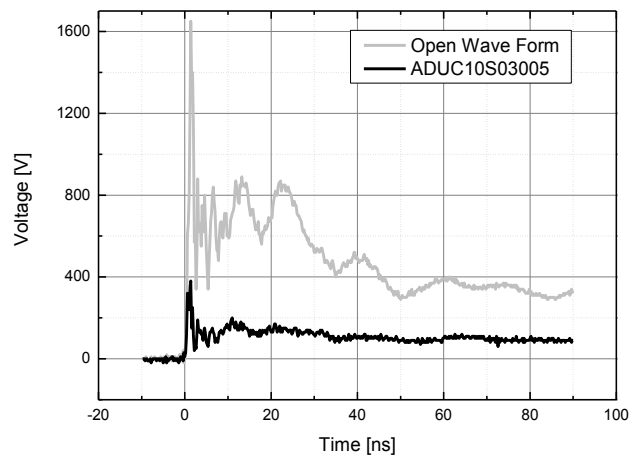
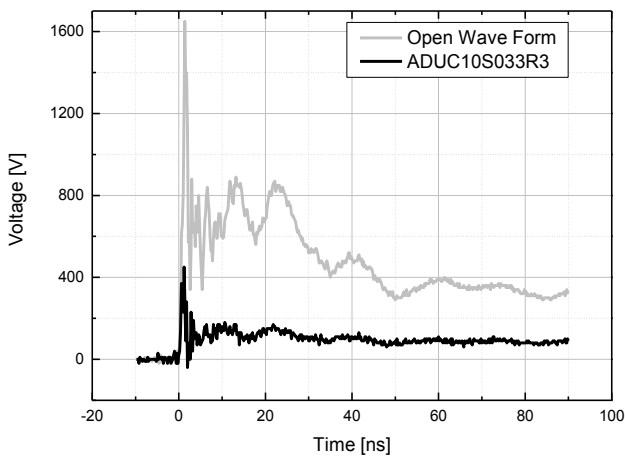
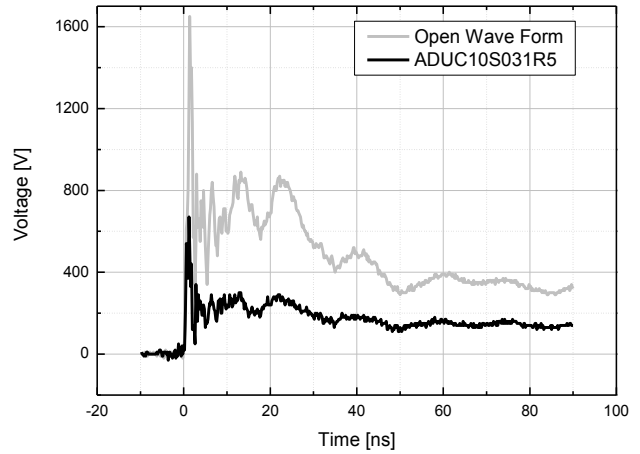
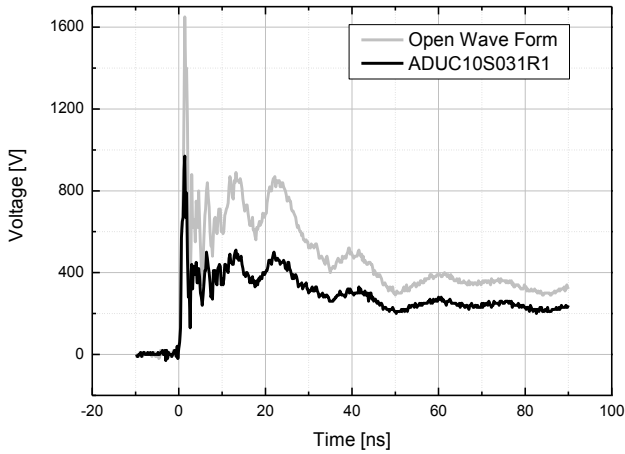
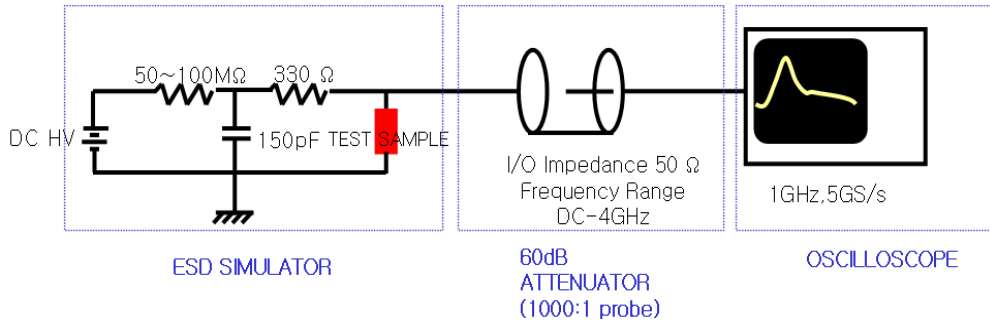
Recommended Soldering Profile

- Pb Free Solder Paste : Sn/Ag/Cu (96.5 / 3.0 / 0.5)



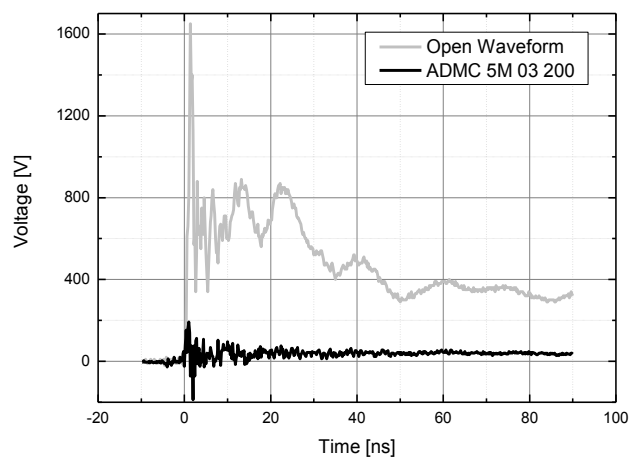
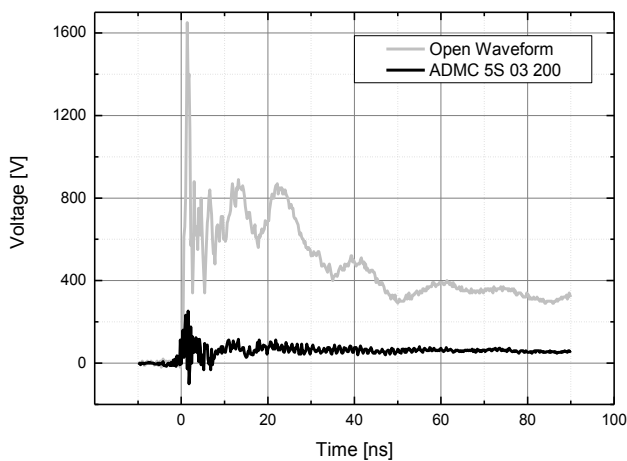
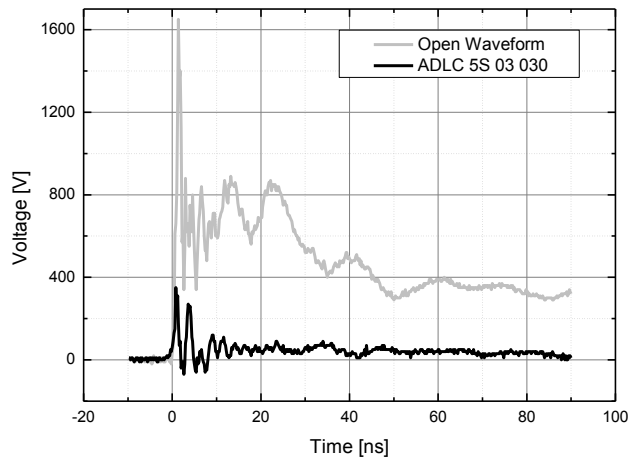
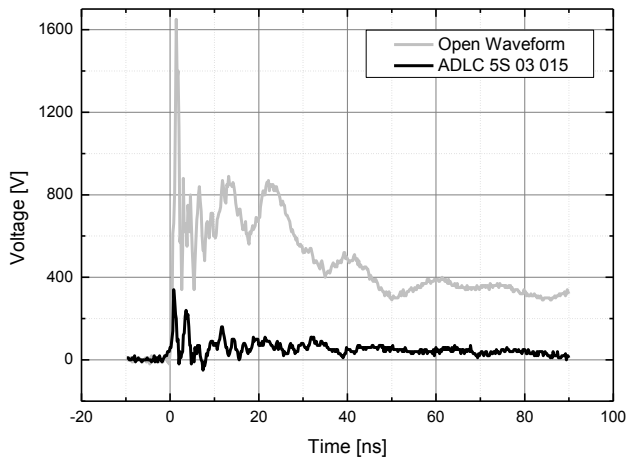
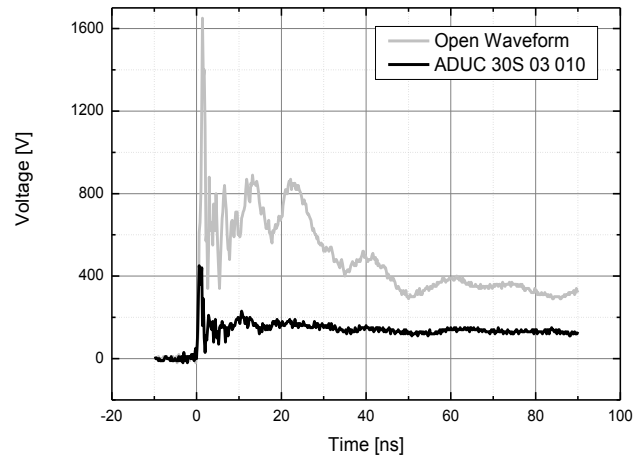
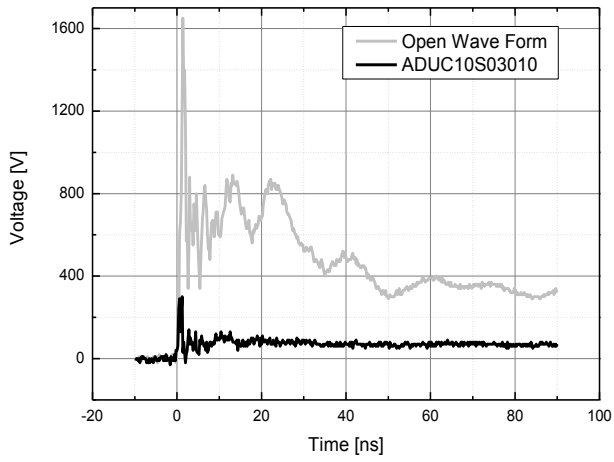
ESD Voltage Waveform

- Test setup

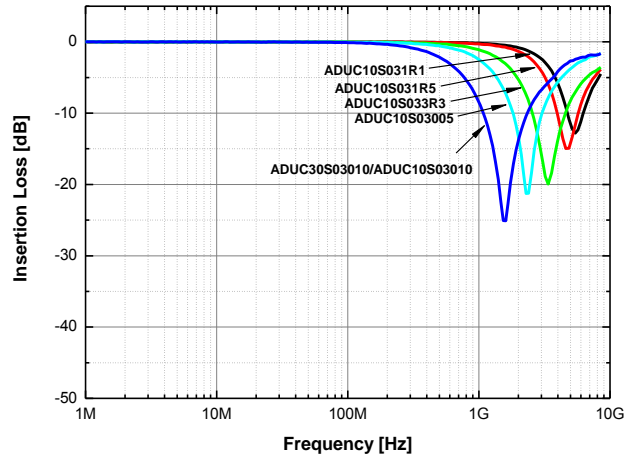
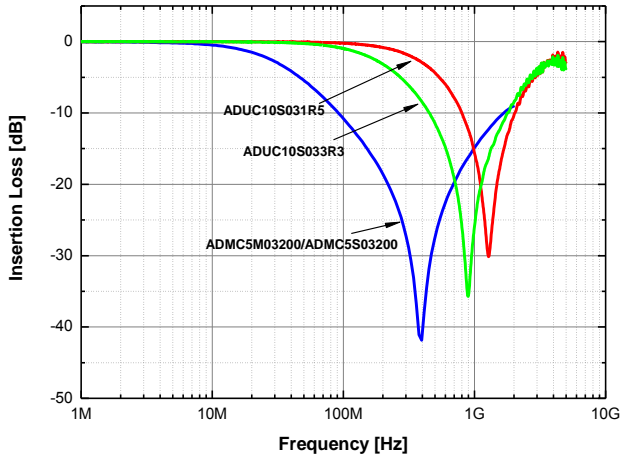


AMODIODE

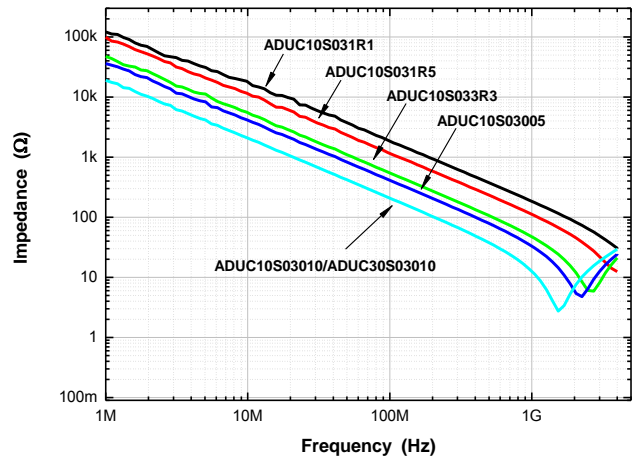
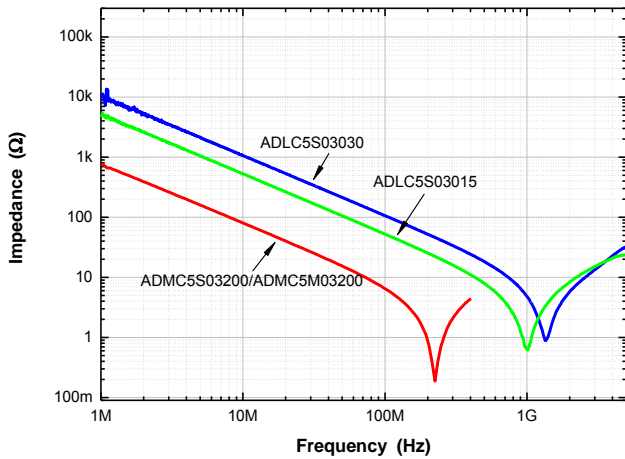
ADUC 0603 series



Frequency Characteristics



Impedance vs. Frequency



Capacitance vs. Frequency

