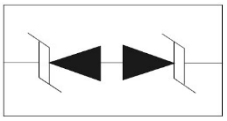
AZ2S5V0UC0

Super Low Capacitance ESD Protection Diode

Key Parameter

V_{RWM}	I_{PP}	C_T
5V	4A	0.40pF

DFN1006



Feature

- Low Capacitance
- Low Clamping Voltage
- Transient Protection for High-Speed Data Lines
  IEC 61000-4-2 (ESD) ±20kV (Contact) / ±20kV (Air)
  IEC 61000-4-5 (Surge) 4A (8/20μs)
- Halogen Free, RoHS Compliant
- Matte Tin (Sn) Lead Finish
- High Temperature Soldering Guaranteed: 260°C/ 10S
- Molding Compound Meets UL 94V-0 Flammability Rating

Maximum Ratings (T_A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Reverse Working Voltage	V_{RWM}	5.0	V
Peak Pulse Current (tp = 8/20μs)	I_{PP}	4	A
Peak Pulse Power (tp = 8/20μs)	P_{PP}	100	W
ESD Withstand Voltage IEC 61000-4-2 (Contact)	$V_{ESD, CONTACT}$	±20	kV
ESD Withstand Voltage IEC 61000-4-2 (Air)	$V_{ESD, AIR}$	±20	kV
Junction Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	I_T= 1mA	V_{BR}	6.0	-	9.0	V
Reverse Current	V_{RWM} = 5V	I_R	-	-	0.1	μA
Capacitance	V_R = 0V, f = 1MHz	C_T	-	0.25	0.40	pF
Clamping Voltage	I_{PP} = 1A, tp = 8/20μs	V_C	-	-	13	V
	I_{PP} = 4A, tp = 8/20μs		-	18	25	V
TLP Clamping Voltage	I_{PP} = 8A, IEC61000-4-2 Level 2 equivalent (±4Kv Contact, ±8kV Air)	V_{CTLP}	-	26	-	V
	I_{PP} = 16A, IEC61000-4-2 Level 4 equivalent (±8kV Contact, ±16Kv Air)		-	38	-	V

Typical Characteristics Curve

Fig 1 Power Derating Curve

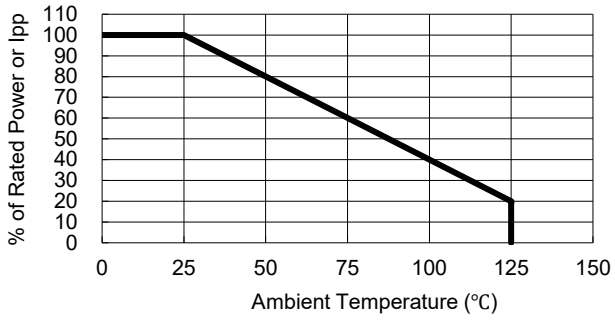


Fig 2 8/20us Waveform per IEC61000-4-5

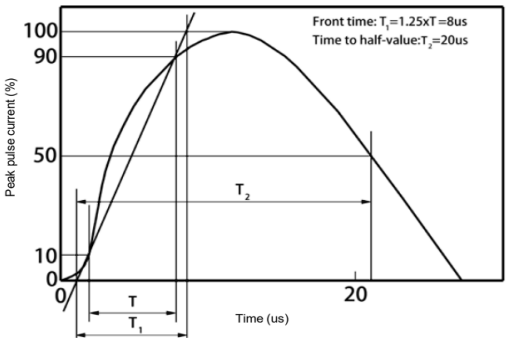


Fig 3 Voltage Sweeping

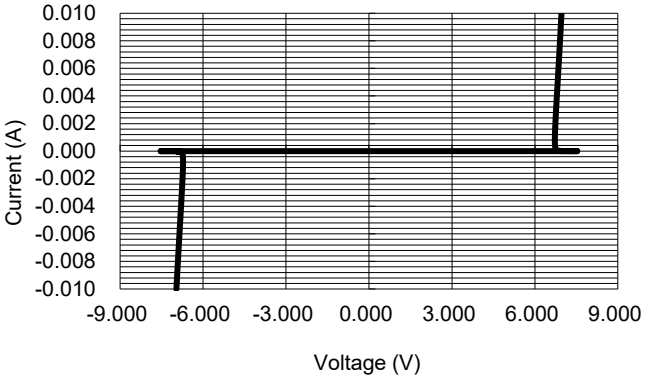


Fig 4 Voltage vs Capacitance

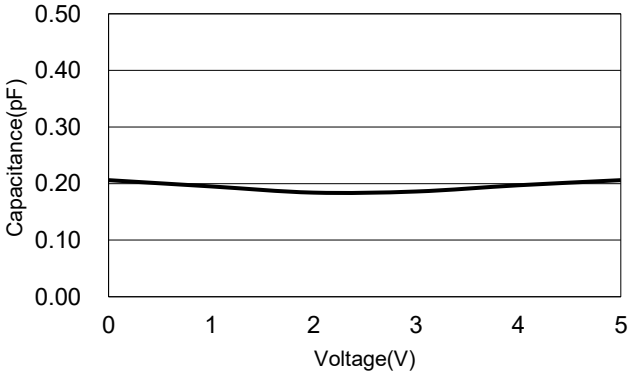


Fig 5 ESD Clamping
(+8kV Contact per IEC 61000-4-2)

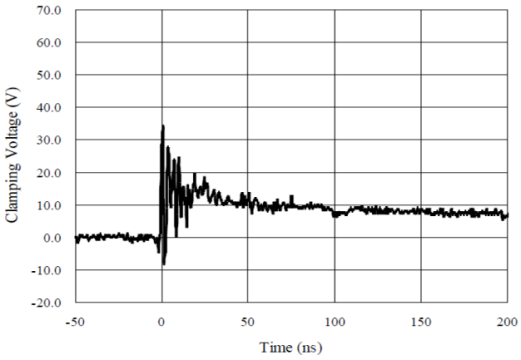


Fig 6 ESD Clamping
(-8kV Contact per IEC 61000-4-2)

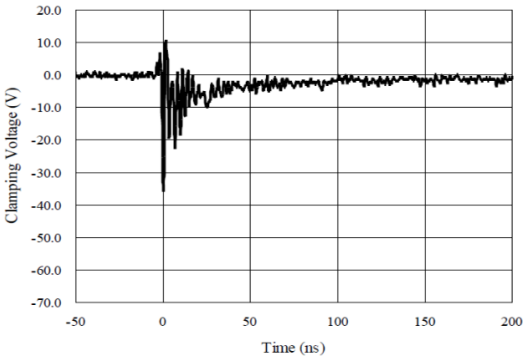


Fig7 Transmission Line Pulsing (TLP) Measurement

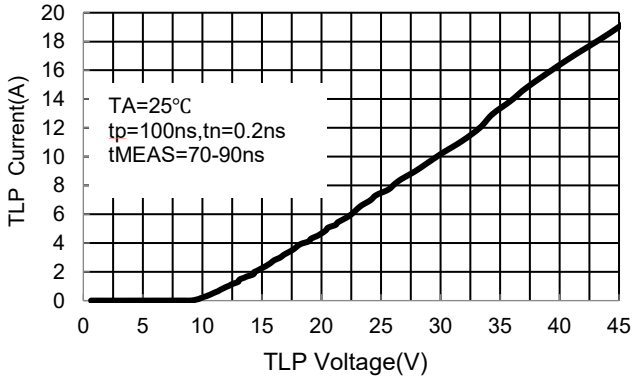
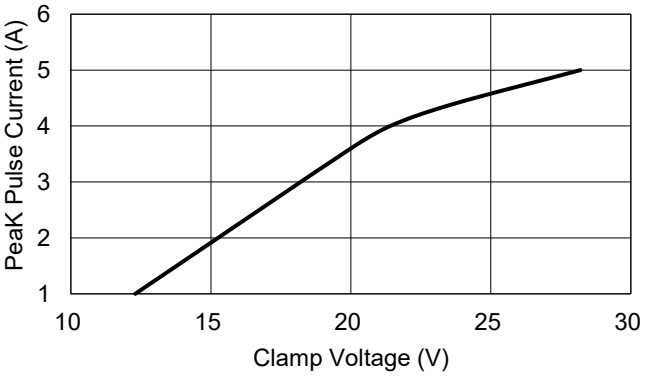
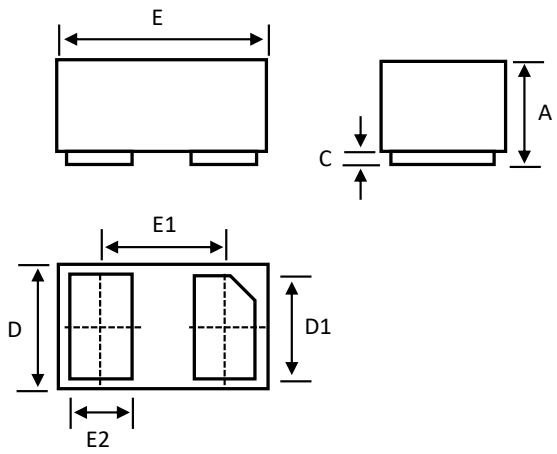


Fig 8 Clamping Voltage vs Peak Pulse Current



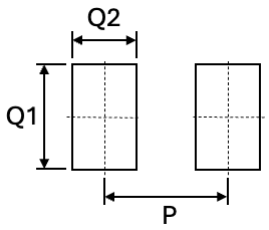
Package Outline Dimensions

DFN1006



Symbol	MIN	MAX
A	0.32	0.55
C	0.03 Typ.	
D	0.50	0.70
D1	0.25	0.60
E	0.90	1.10
E1	0.65BSC	
E2	0.15	0.40
Unit: mm		

Suggested Pad Layout



Symbol	Typ.
P	0.7
Q1	0.6
Q2	0.4
Unit: mm	

Device Marking Code & Ordering Information

Device	Marking	Quantity	Packing
AZ2S5V0UC0	21	10,000 Pcs	7" Tape & Reel

21: Device marking code

Notice

AZUREMOTO DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED.

AZUREMOTO RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY OR RUGGEDNESS.