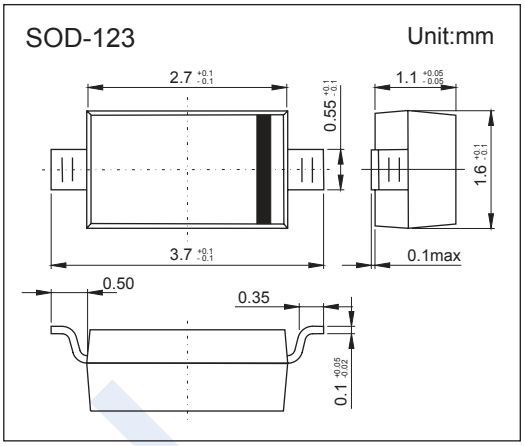
TVS Diodes

AZ4012-01G



■ Features

- ● ESD/Surge Protection for 1 Line with Unidirectional.
- ● Provide ESD protection for each line to
  IEC 61000-4-2 (ESD) ±30kV (air / contact)
  IEC 61000-4-4 (EFT) 80A (5/50ns)
  IEC 61000-4-5 (Lightning) 20A (8/20μs)
- ● Fast turn-on and Low clamping voltage
- ● Suitable for, 12V and below, operatingo
  voltage applications

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Operating Supply Voltage (pin-1 to pin-2)	V_{DC}	13	V
Pin-1 to Pin-2 ESD Per IEC 61000-4-2 (Air)	V_{ESD}	±30	KV
Pin-1 to Pin-2 ESD Per IEC 61000-4-2 (Contact)			
Peak Pulse Current (tp =8/20us)	I_{PP}	20	A
Junction Temperature	T_J	150	℃
Lead Soldering Temperature	T_{SOL}	260 (10sec)	
Operating Temperature	T_{OPR}	-55 to 85	
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}	pin-1 to pin-2, T=25℃			12	V
Reverse Leakage Current	I_{Leak}	V_{RWM} = 12V, T=25℃, pin-1 to pin-2.			1	uA
Reverse Breakdown Voltage	V_{BV}	I_{BV} = 1mA, T=25℃, pin-1 to pin-2	14.4		15.9	V
Forward voltage	V_F	I_F= 15 mA,T=25℃, pin-1 to pin-2	0.6		1.2	
Surge Clamping Voltage	$V_{CL-surge}$	I_{PP}=5A, tp=8/20us, T=25℃, pin-1 to pin-2.		16.5		
ESD Clamping Voltage	V_{clamp}	IEC 61000-4-2 +6kV, T=25 ℃, Contact mode, pin-1 to pin-2.		17.5		
ESD Dynamic Turn-on Resistance	$R_{dynamic}$	IEC 61000-4-2 0~+6kV, T=25℃, Contact mode, pin-1 to pin-2.		0.12		Ω
Channel Input Capacitance	C_{IN}	V_R= 0 V, f= 1 MHz ,T=25℃, pin-1 to pin-2.		290	320	pF

■ Marking

Marking	pX

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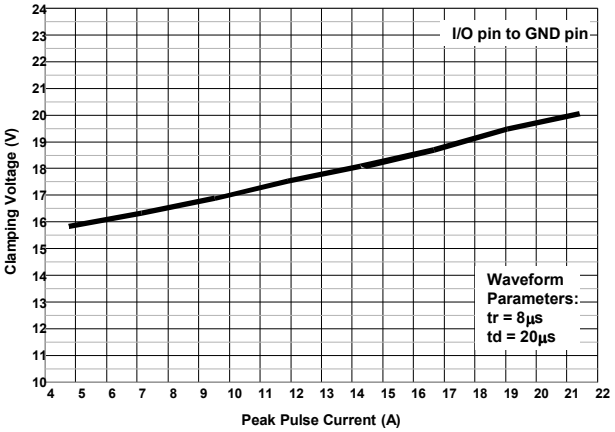
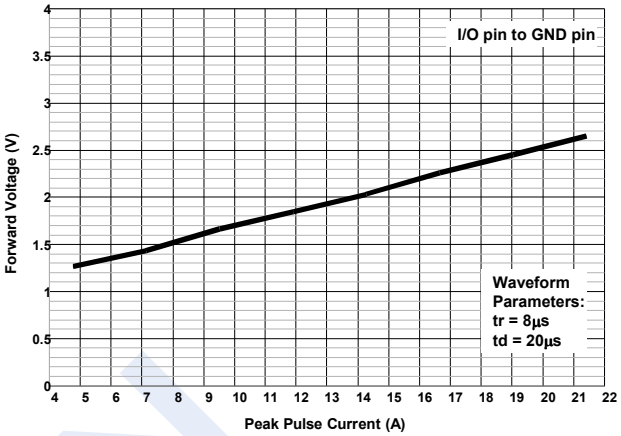
■ Typical Characterisitics

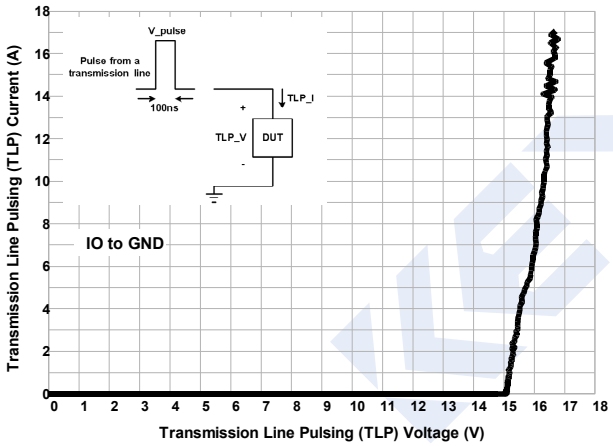
Reverse Clamping Voltage vs. Peak Pulse Current



Forward Clamping Voltage vs. Peak Pulse Current



Transmission Line Pulsing (TLP) Measurement



Typical Variation of CIN vs. VIN