

SOT-23 Plastic-Encapsulate ESD Protection Diodes

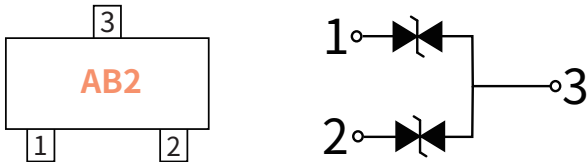
Features

- Low leakage current
- SOT-23 surface mount package
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 35A

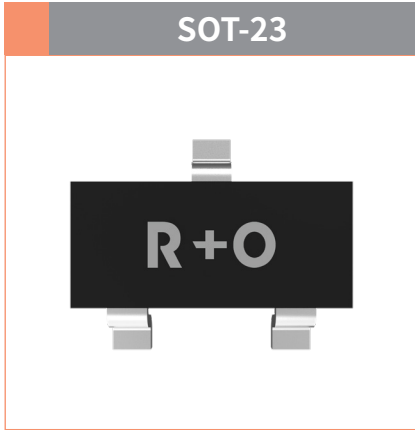
Applications

- Automotive Applications
- CAN Bus
- Electronic Control Units
- Body Control Units
- ADAS Control Units
- PowerTrain Control Units

Function Diagram



Reverse Working Voltage
12V Max.
Normal capacitance
60pF(Max.)

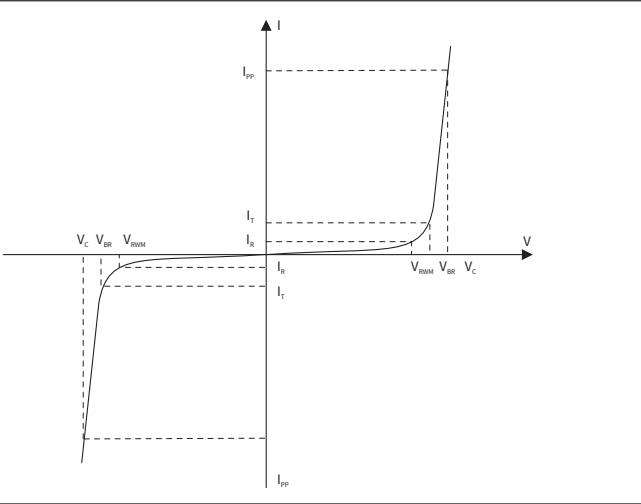


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
VESD	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	±30	KV
		ESD per IEC 61000-4-2(Contact)	±30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	1260	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	35	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

Electrical Parameter

SYMBOL	PARAMETER
V _C	Clamping Voltage @ I _{PP}
V _{BR}	Breakdown Voltage @ I _T
I _{PP}	Peak Pulse Current
I _T	Test Current
I _R	Reverse Leakage Current @ VRWM
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
C _J	Junction Capacitance @ V _R =0V,f=1MHz
I _F	Forward Current
V _F	Forward Voltage @I _F



● Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^{\circ}C$	—	—	12	V
Breakdown Voltage	V_{BR}	$I_R=1.0mA, T_a=25^{\circ}C$	13.3	—	16.5	V
Reverse Leakage Current	I_R	$V_R=12V, T_a=25^{\circ}C$	—	—	1	μA
Clamping Voltage	V_C	$I_{PP}=1.0A, t_p=8/20\mu s$	—	—	19	V
		$I_{PP}=10A, t_p=8/20\mu s$	—	—	30	
		$I_{PP}=35A, t_p=8/20\mu s$	—	—	36	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	—	—	60	pF

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

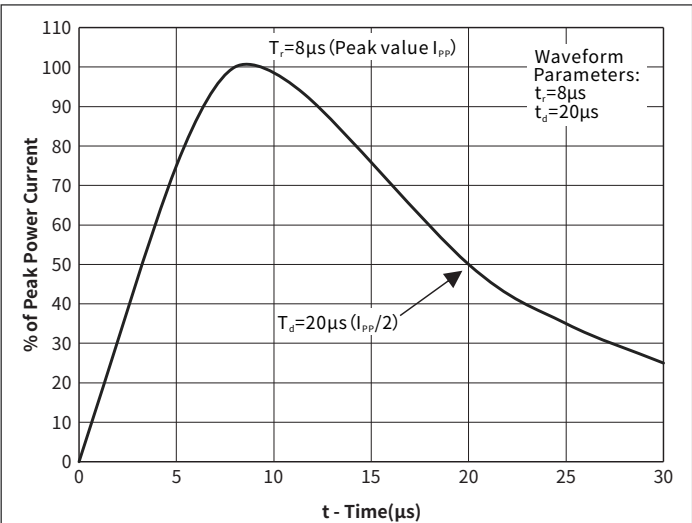


Fig.1 Pulse Waveform

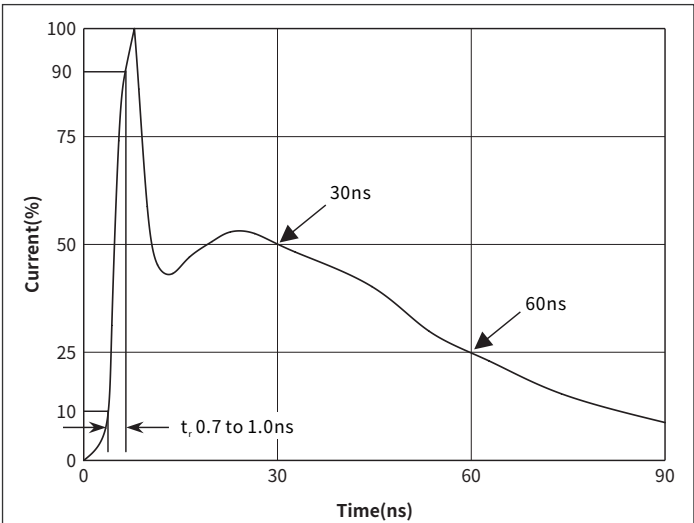


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)



Fig.3 Peak Pulse Power vs. Pulse Time

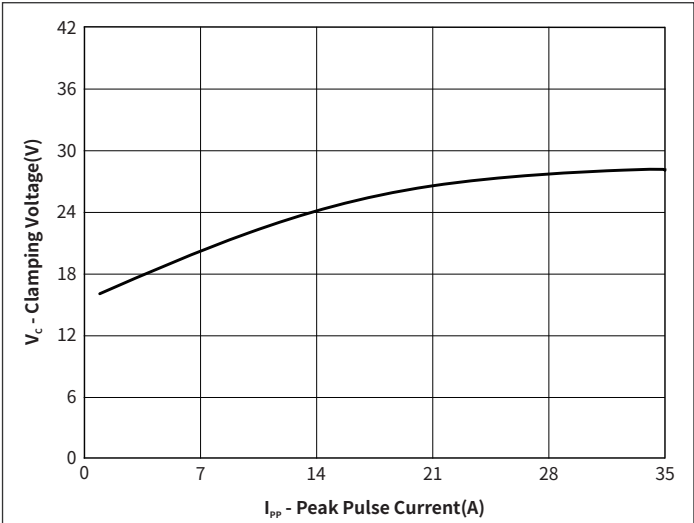


Fig.4 Clamping Voltage vs. Peak Pulse Current

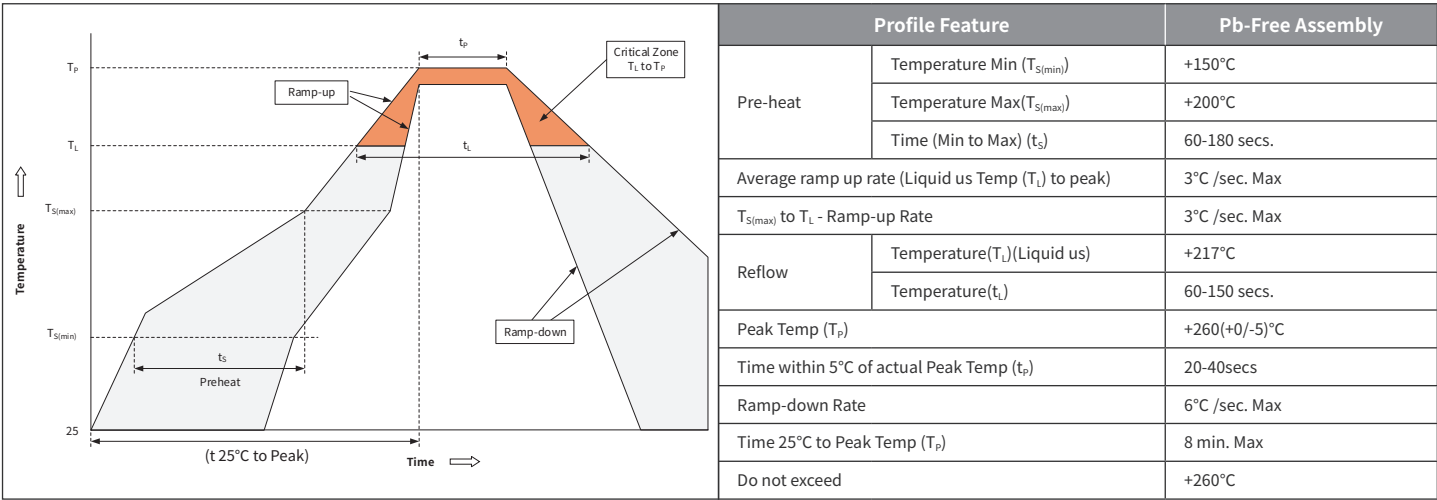
H12VNT2B

Bi-directional 12V Normal Capacitance ESD

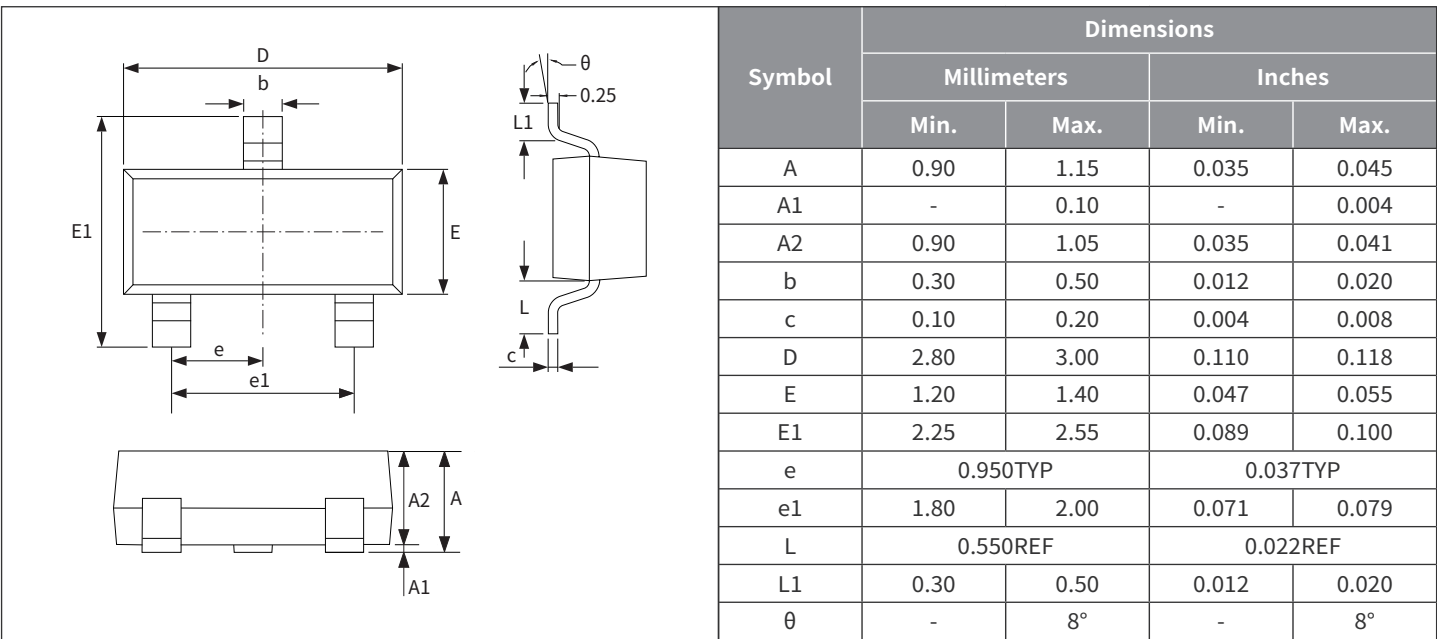
● Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H12VNT2B	SOT-23	2.90×2.40×1.025	7" REEL	3000

● Recommended Soldering Conditions



● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

