

SOT-23 Plastic-Encapsulate ESD Protection Diodes

Features

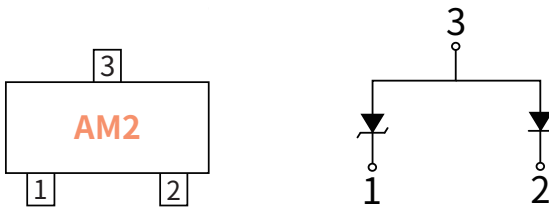
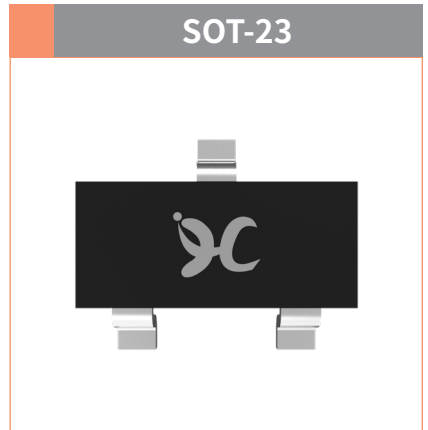
- Low leakage current
- SOT-23 surface mount package
- IEC 61000-4-2 (ESD Air): $\pm 30\text{kV}$
- IEC 61000-4-2 (ESD Contact): $\pm 30\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 μs): 35A

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Server and Desktop PC

Reference News

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

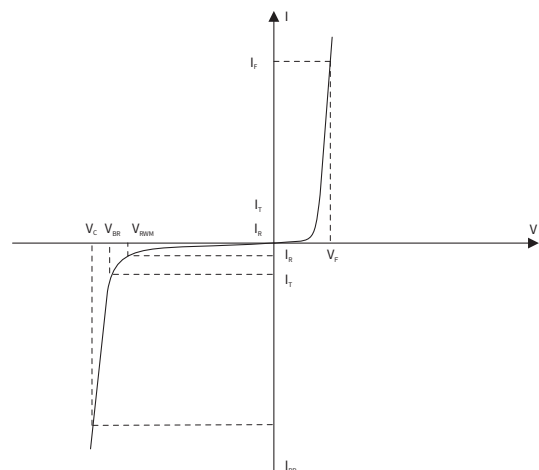


Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{ESD}	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}	$T_a=25^\circ\text{C}$	—	—	12	V
Breakdown Voltage	V_{BR}	$I_T=1.0\text{mA}, T_a=25^\circ\text{C}$	13.3	—	16	V
Reverse Leakage Current	I_R	$V_{RWM}=12\text{V}, T_a=25^\circ\text{C}$	—	—	1	μA
Clamping Voltage	V_C	$I_{PP}=1.0\text{A}, t_p=8/20\mu\text{s}$	—	—	20	V
		$I_{PP}=12\text{A}, t_p=8/20\mu\text{s}$	—	—	25	
		$I_{PP}=35\text{A}, t_p=8/20\mu\text{s}$	—	—	36	
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}, \text{Pin1 to Pin2}$	—	60	90	pF

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

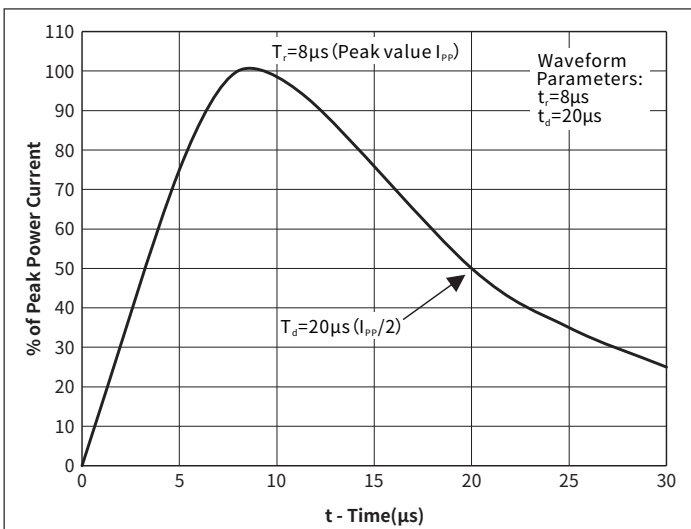


Fig.1 Pulse Waveform

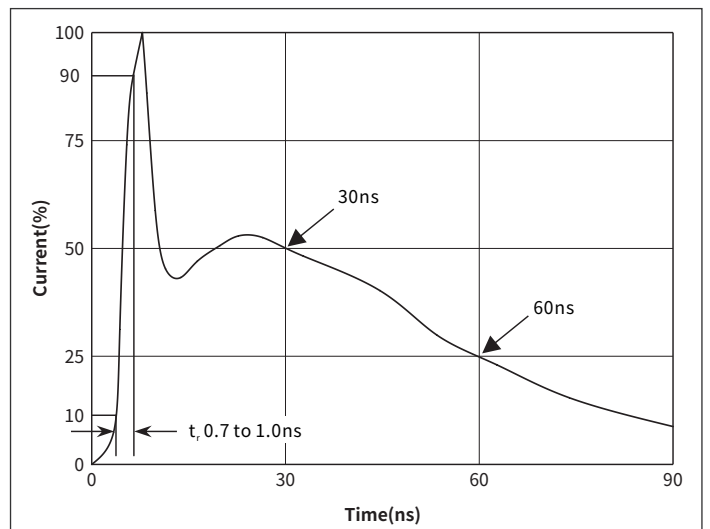


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

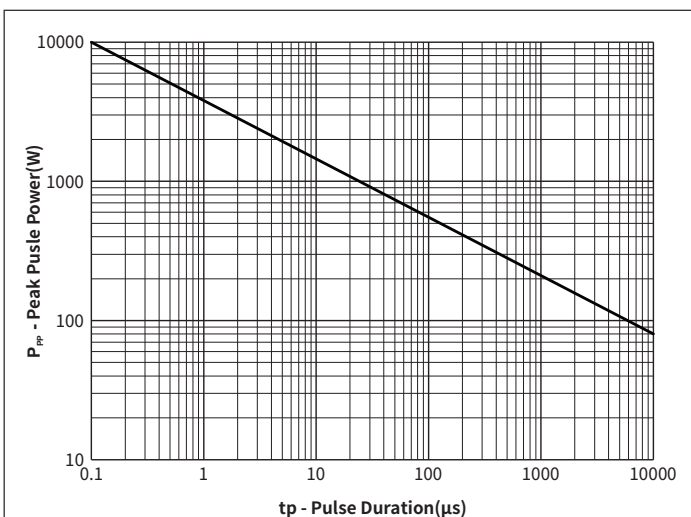


Fig.3 Peak Pulse Power vs. Pulse Time

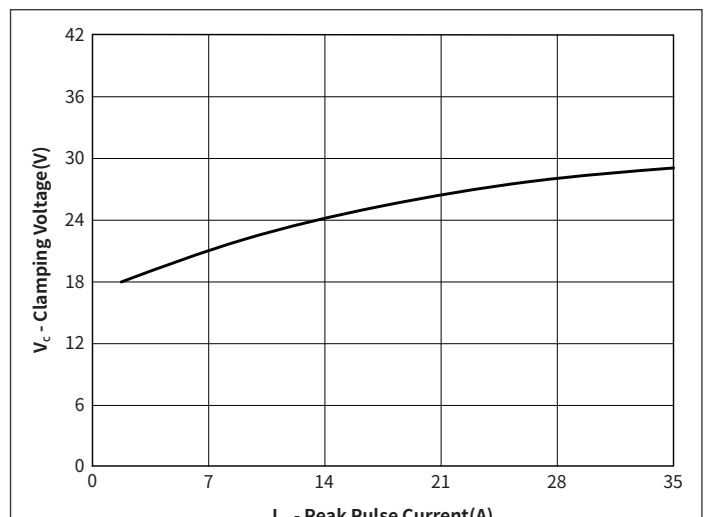
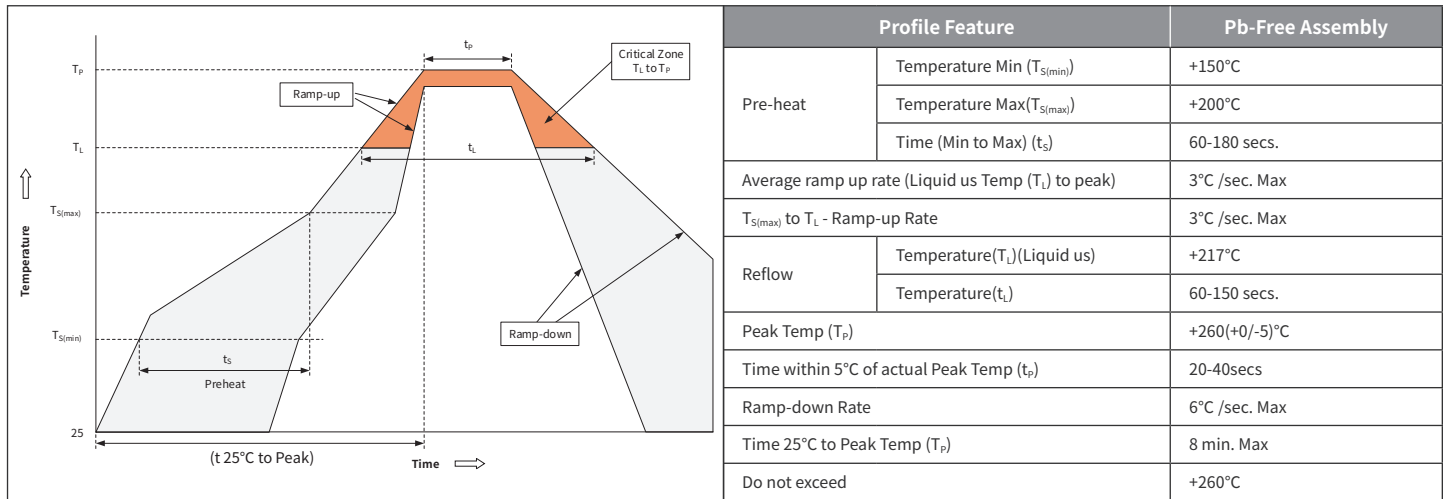


Fig.4 Clamping Voltage vs. Peak Pulse Current

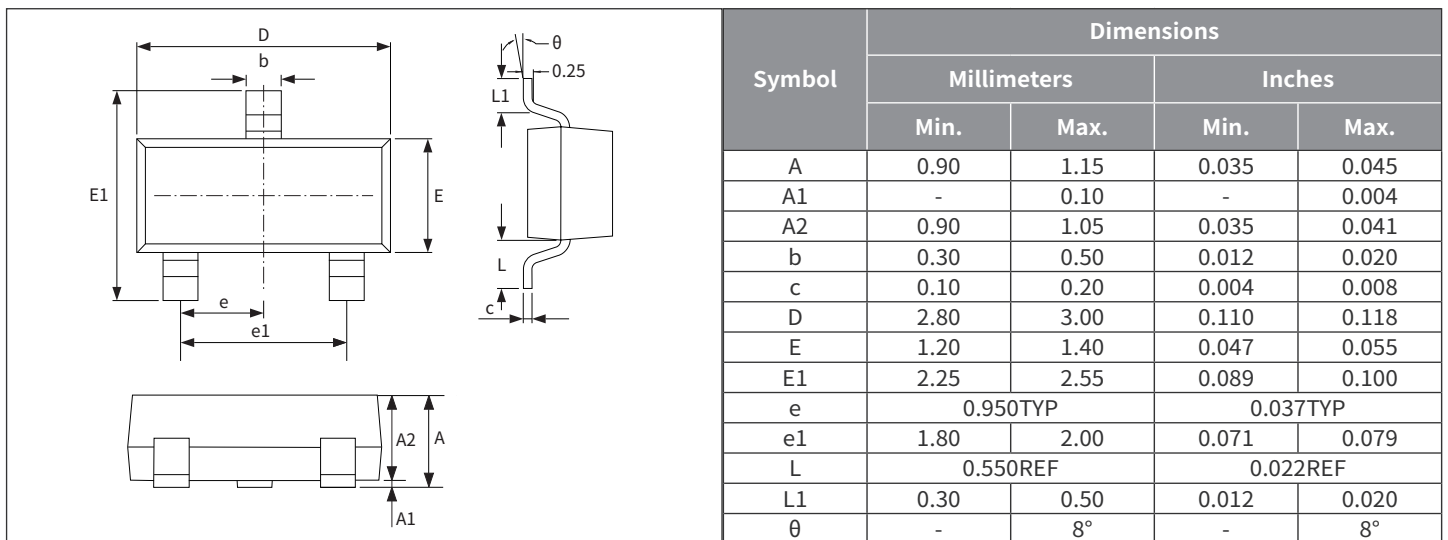
Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H12VNT2U	SOT-23	2.90×2.40×1.025	7" REEL	3000

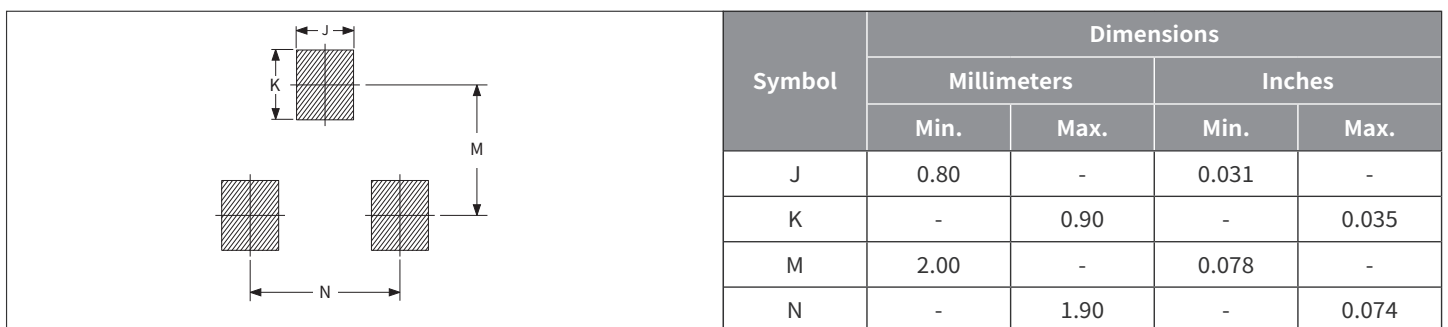
Recommended Soldering Conditions



Package Outline Dimensions (SOT-23)



Suggested Pad Layout



Note:
This soldering footprint is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

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