

SOT-23 Plastic-Encapsulate ESD Protection Diodes

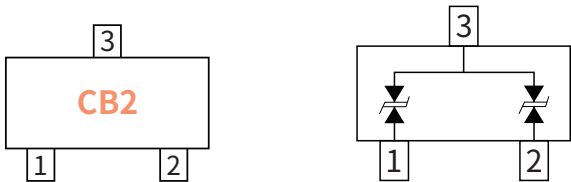
Features

- 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): 7A

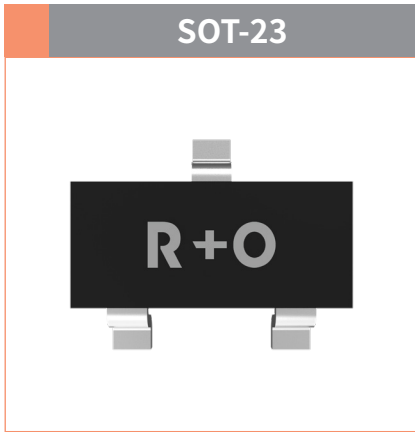
Applications

- Protection of RS-485 transceivers with extended common-mode range
- Security systems
- Automatic teller machines
- HFC systems
- Net works

Function Diagram



Reverse Working Voltage
24V Max.
Normal Capacitance
25pF(Typ.)

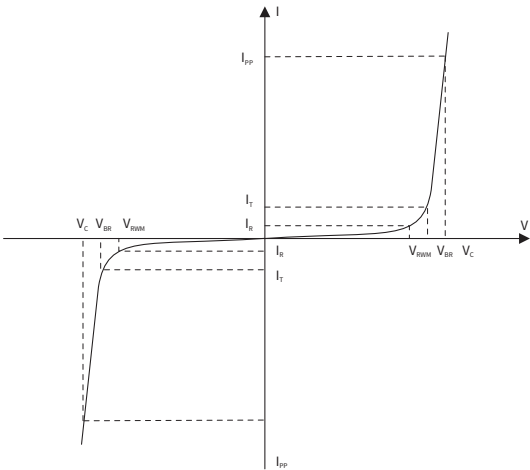


Maximum Ratings (Ta=25°C Unless otherwise specified)

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	350	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	7.0	A
T _J	Operating JunctionTemperature Range	—	-50 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}	$T_a=25^{\circ}C$	—	—	24	V
Breakdown Voltage	V_{BR}	$I_T=1.0mA, T_a=25^{\circ}C$	26.7	—	—	V
Reverse Leakage Current	I_R	$V_{RWM}=24V, T_a=25^{\circ}C$	—	—	1.0	μA
Clamping Voltage	V_C	$I_{PP}=7.0A, t_p=8/20\mu s$	—	—	42	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz, Pin1\ to\ Pin2$	—	25	50	pF

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

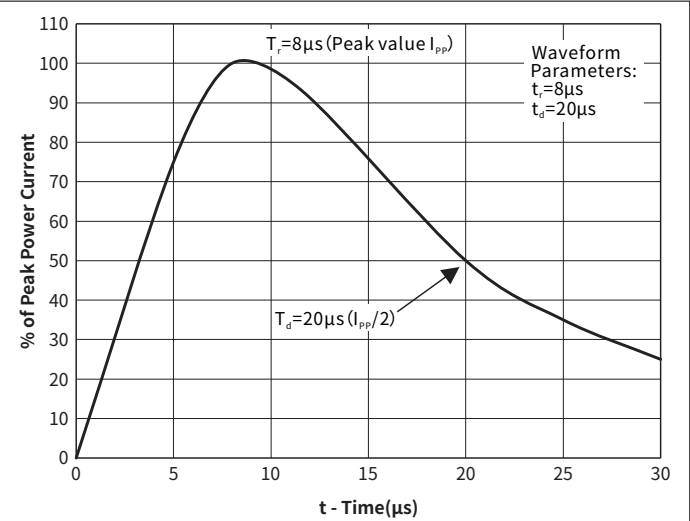


Fig.1 Pulse Waveform

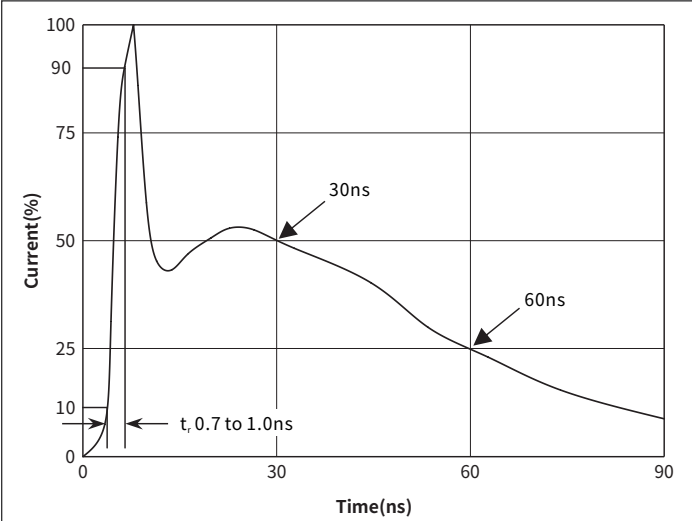


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

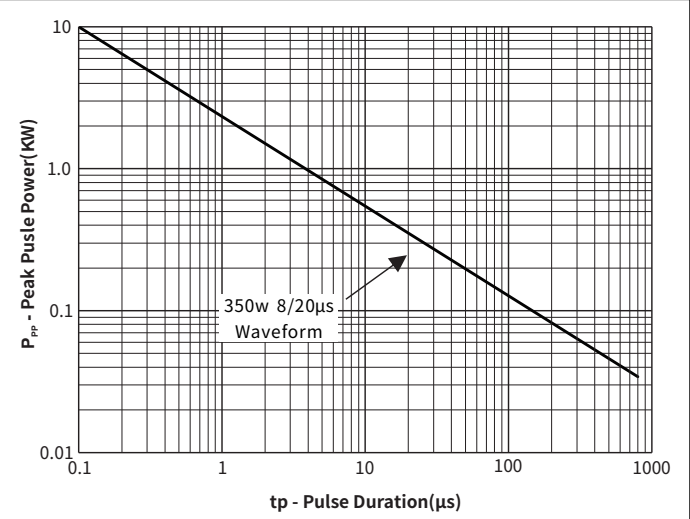


Fig.3 Peak Pulse Power vs. Pulse Time

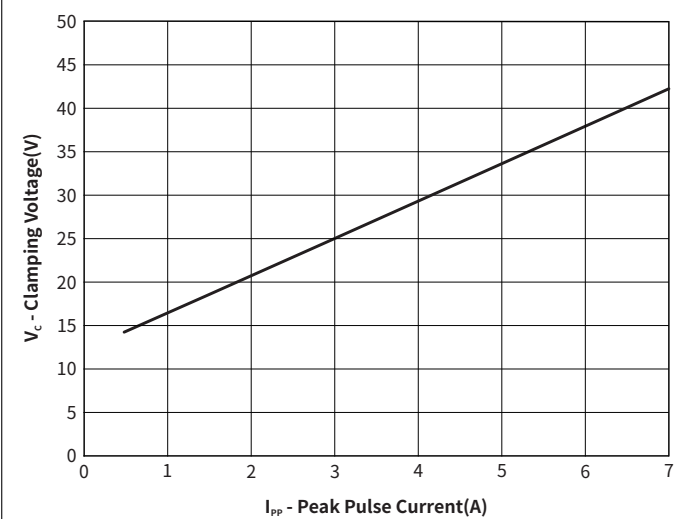
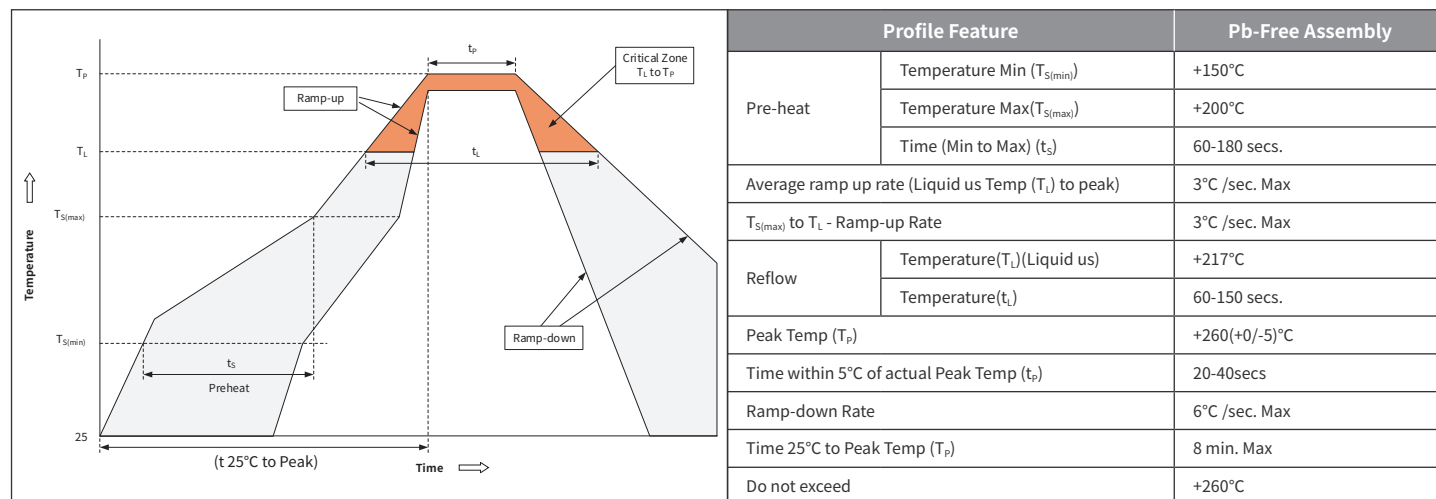


Fig.4 Clamping Voltage vs. Peak Pulse Current

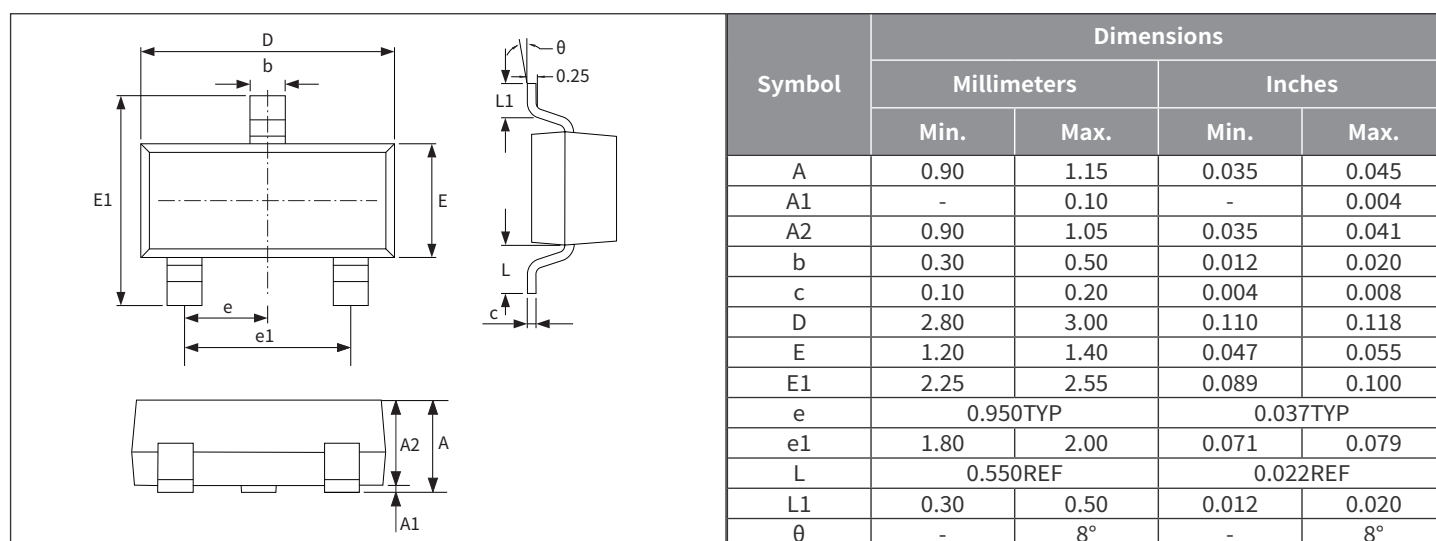
Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
PESD1CAN	SOT-23	2.90×2.40×1.025	7" REEL	3000

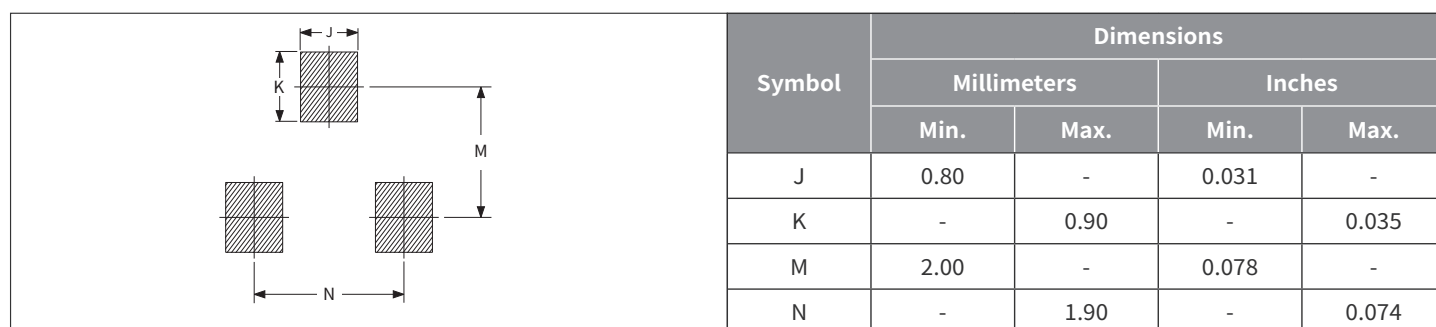
Recommended Soldering Conditions



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.