

Features

- ◇ 350W(8x20us) Peak Pulse Power
- ◇ Low Clamping Voltage
- ◇ SOD-323 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect One I/O or Power Line
- ◇ Meet IEC61000-4-2 Level 4:
Contact Discharge > 30 kV
Air Discharge > 30 kV

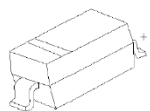
Applications

- ◇ Smart Phones
- ◇ Laptop Computers
- ◇ Portable Electronics

Ordering information

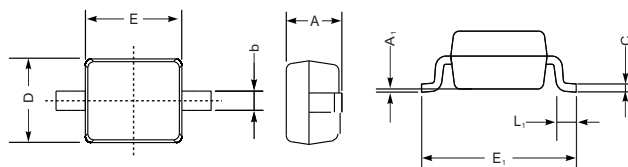
Device	Package	Making
SD12	SOD-323	ZC

Circuit Diagram



SOD-323

SOD323



UNIT		A	C	D	E	E ₁	b	L ₁	A ₁
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—
mil	max	43	5.9	55	70	108	16	16	8
	min	32	3.1	47	63	100	9.8	7.9	—

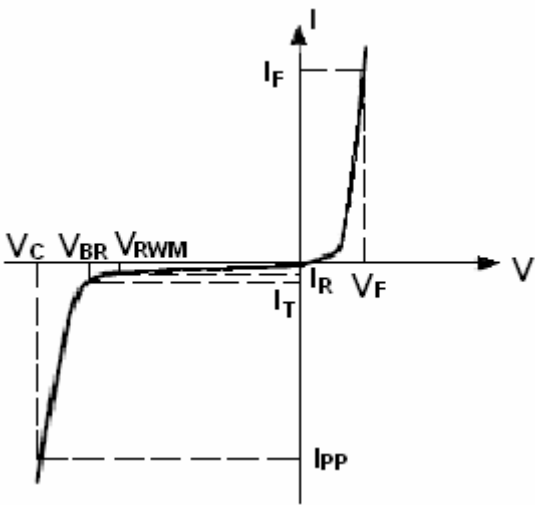
Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Unit
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C
Ipp Max	Maximum Peak Pulse Current	12	A
PPK	Peak Pulse Power	350	W

SD12

Electrical Parameter

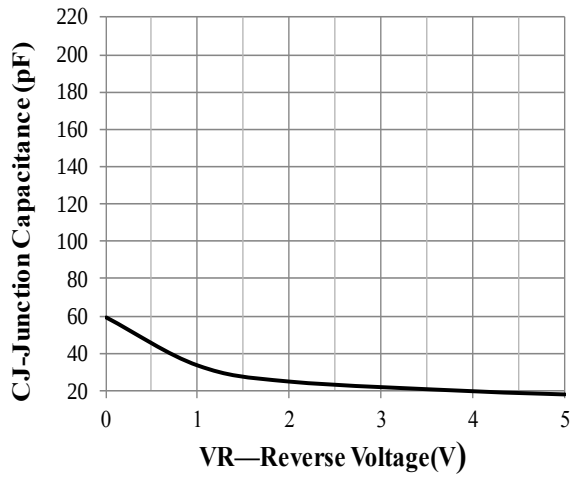
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



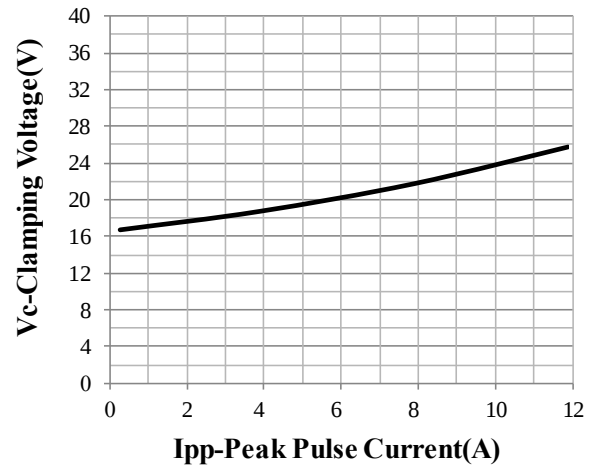
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				12	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	13.3	14.4	17	V
IR	Reverse Leakage Current	$V_{RWM} = 12\text{V}$			1	μA
VC	Clamping Voltage	$I_{PP} = 1\text{A} (8/20\mu\text{s})$			22	V
VC	Clamping Voltage	$I_{PP} = 12\text{A} (8/20\mu\text{s})$		25	30	V
Ipp	Peak Pulse Current	$t_p = 8/20\mu\text{s}$			12	A
CJ	Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		60	80	pF

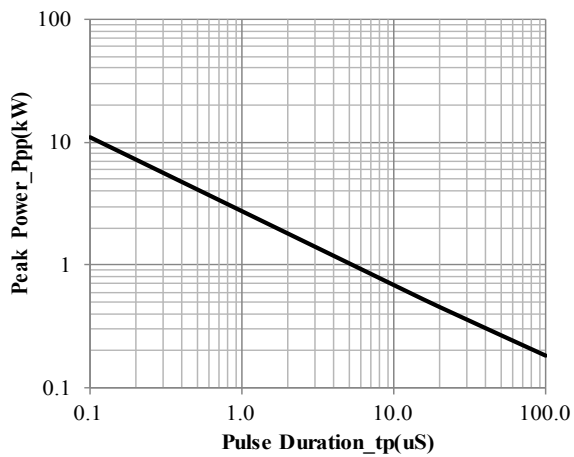
RATING AND CHARACTERISTIC CURVES (SD12)



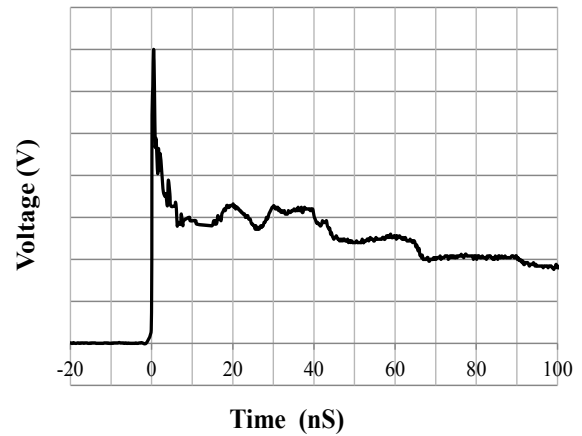
Junction Capacitance vs. Reverse Voltage



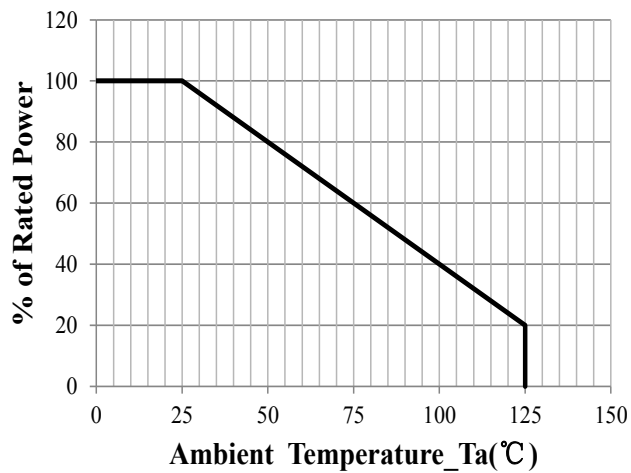
Clamping Voltage vs. Peak Pulse Current



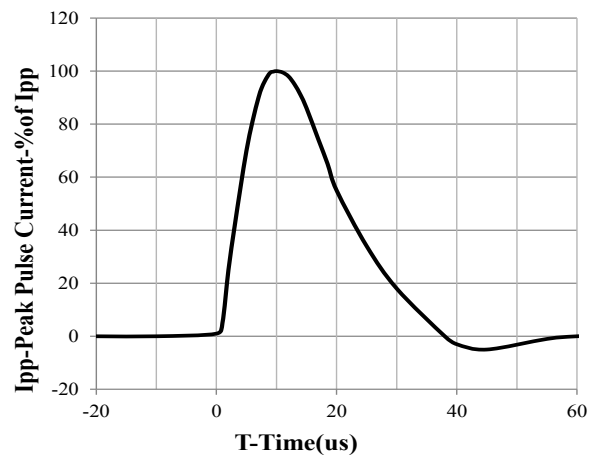
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20us Pulse Waveform