

Features

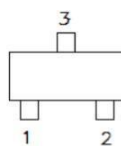
200W (8/20 μ s) Peak Pulse Power
High ESD Protection Level
SOT-323 Thin SMD Package
RoHS compliant
Matte Tin Lead finish (Pb-Free)
Protects two lines

C03

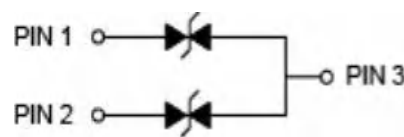
Applications

Dataline
Automatic Teller Machines
Net works
Power line

SOT-323



1.BASE
2.EMITTER
3.COLLECTOR



Schematic & PIN Configuration

Absolute Maximum Rating

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	$V_{ESD(1)}$	± 25	kV
Air Model		± 25	
Contact Model		± 16	
JESD22-A114-B ESD Voltage	Per Human Body Model	± 0.4	
ESD Voltage	Machine Model	200	W
Peak Pulse Power	$P_{PP(2)}$	3	A
Peak Pulse Current	$I_{PP(2)}$	260	$^{\circ}\text{C}$
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	150	$^{\circ}\text{C}$
Junction Temperature	T_j	-55 ~ +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}		

(1).Device stressed with ten non-repetitive ESD pulses.

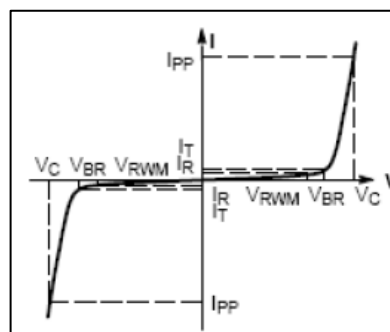
(2).Non-repetitive current pulse 8/20 μ s exponential decay waveform according to IEC61000-4-5.

Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				24	V
VBR	Reverse Breakdown Voltage	IT = 1mA	26.7	28	33	V
IR	Reverse Leakage Current	VRWM = 24 V			1	μA
VC	Clamping Voltage	IPP = 1 A (8/20μs)		35	40	V
VC	Clamping Voltage	IPP = 3 A (8/20μs)		38	60	V
Ipp	Peak Pulse Current	tp = 8/20 μs			3	A
CJ	Capacitance	VR = 0V, f = 1MHz		20		pF

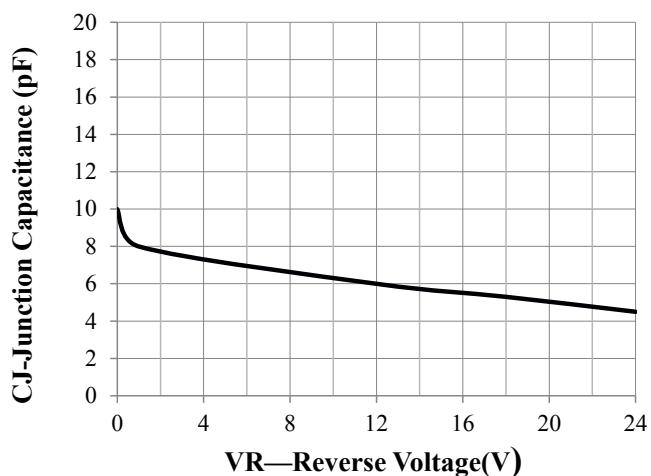
Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
VC	Clamping Voltage @ IPP
IPP	Peak Pulse Current
VBR	Breakdown Voltage @ IT
IT	Test Current
IR	Reverse Leakage Current @ VRWM
VRWM	Reverse Standoff Voltage

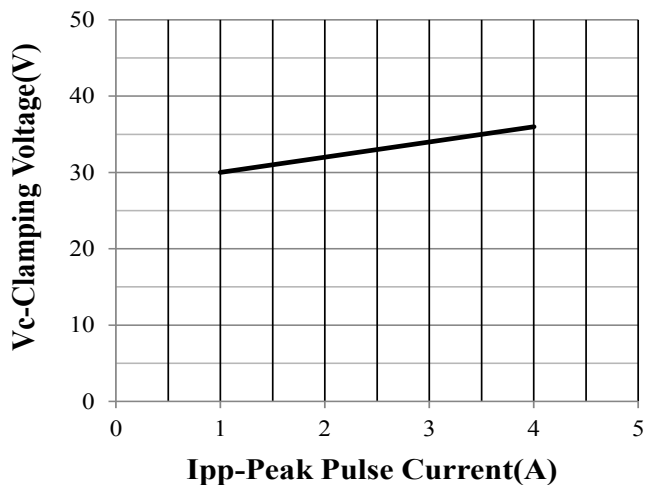


V-I characteristics for a Bi-directional TVS

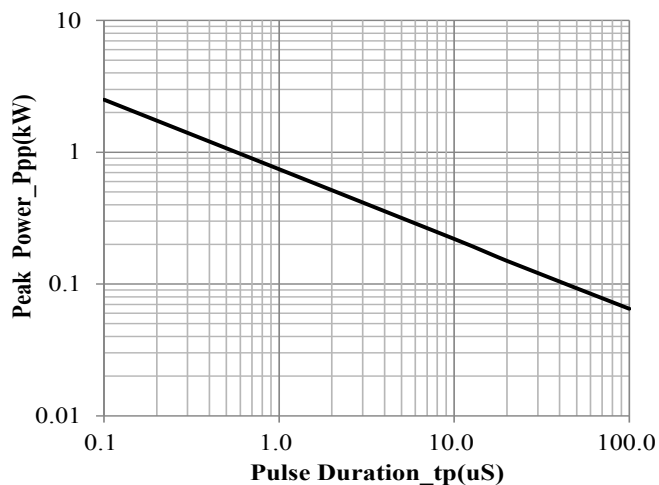
RATING AND CHARACTERISTIC CURVES



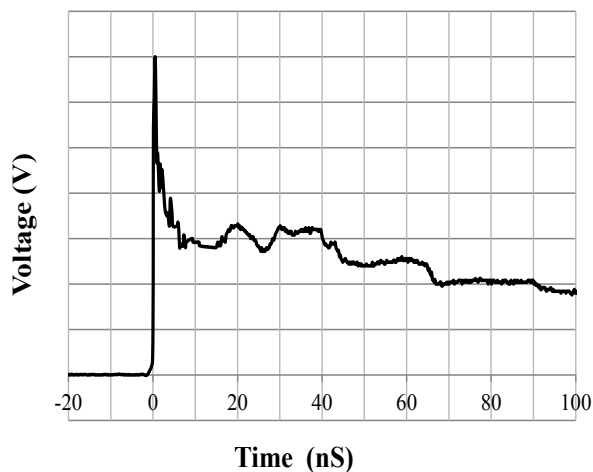
Junction Capacitance vs. Reverse Voltage



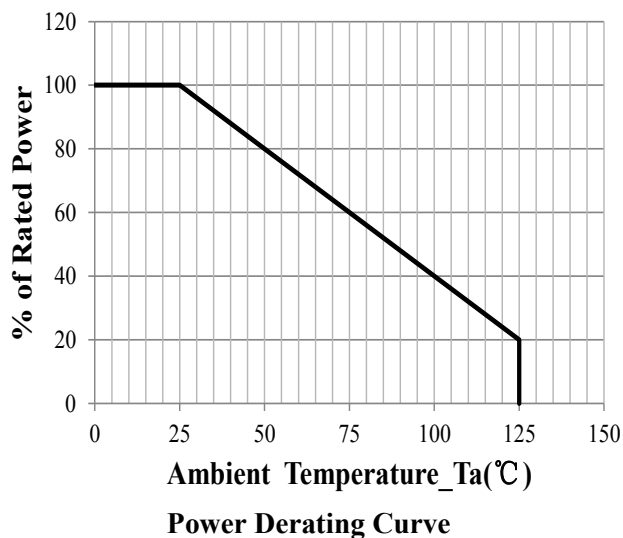
Clamping Voltage vs. Peak Pulse Current



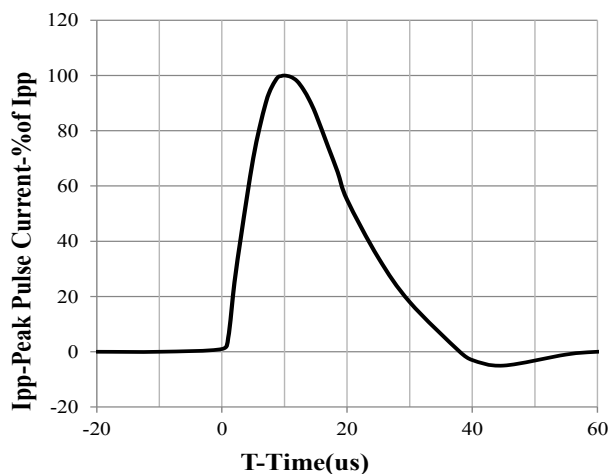
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



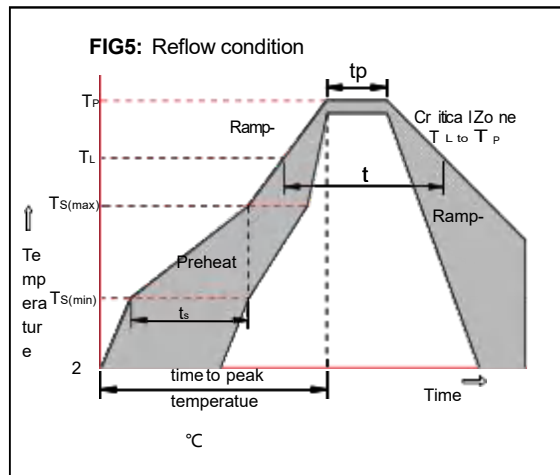
Power Derating Curve



8 X 20us Pulse Waveform

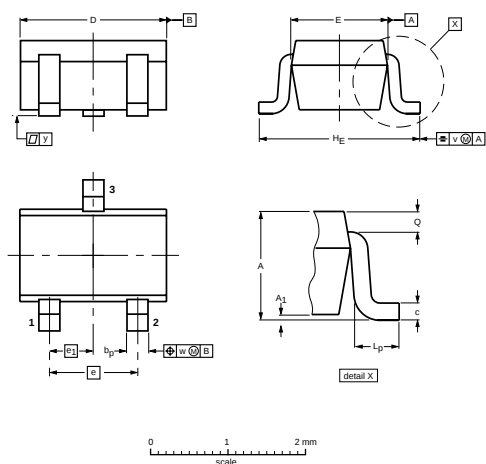
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



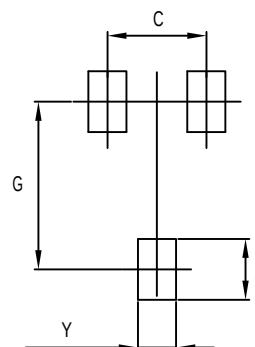
Package Dimensions & Suggested Pad Layout

SOT-323



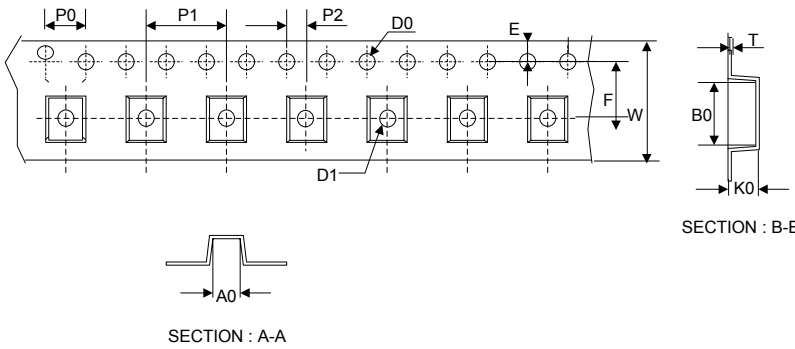
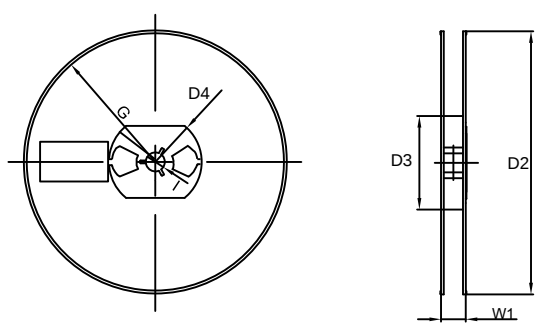
DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _P	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2



Dimensions	Value (in mm)
C	1.30
G	2.00
X	0.90
Y	0.65

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.20
		D1	1.00±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	2.50±0.20
		B0	2.60±0.20
		K0	1.40±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
		D4	R24.6±2.0
7" Reel		G	R82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 3000PCS	