Features

2 Unidirectional transil functions
Low leakage current:IR max< 20 μA at VRM
350W peak pulse power(8/20μs)
Transient protection for data lines as per
IEC61000-4-2(ESD) 15KV(air) 8KV(contact)
IEC61000-4-5(Lightning) see IPPM below

Applications

Computers
Printers
Communication systems

12C

Mechanical Data

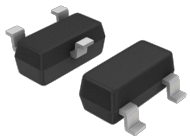
SOT-23 package

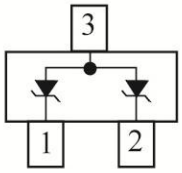
Molding compound flammability rating: UL 94V-0

Packaging: Tape and Reel

RoHS/WEEE Compliant

SOT-23





Schematic & PIN Configuration

Absolute Maximum Rating

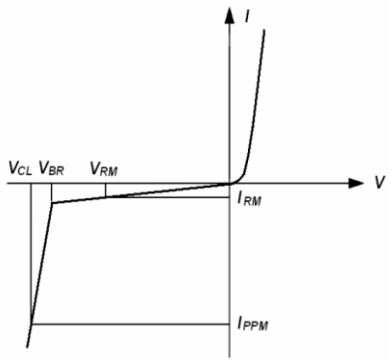
Parameter	Symbol	Limits	Unit
Peak Pulse Power (tp = 8/20μs)	PPP	350	W
Lead Solder Temperature − Maximum (10 Second Duration)	TL	260	ºC
Storage Temperature Range	Tstg	−55～+150	°C
Operating Temperature Range	Top	−40～+125	°C
Maximum junction temperature	Tj	150	°C
Electrostatic discharge IEC61000-4-2 air discharge IEC61000-4-2 contact discharge	VPP	 15 8	kV

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

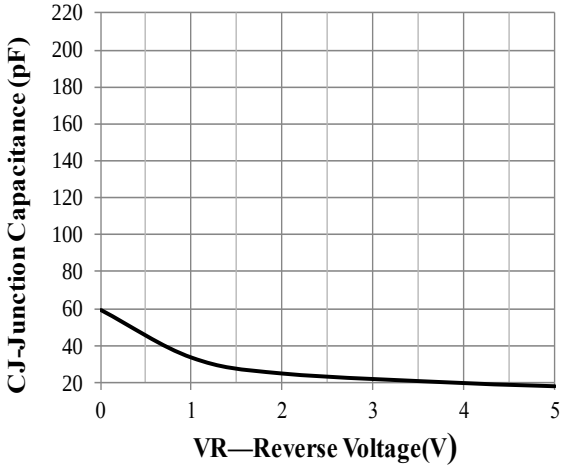
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				12	V
VBR	Reverse Breakdown Voltage	IT = 1mA	13.3	14.4	17	V
IR	Reverse Leakage Current	VRWM = 1 2 V			1	μA
VC	Clamping Voltage	IPP = 1 A (8/20μs)			22	V
VC	Clamping Voltage	IPP = 1 2 A (8/20 μs)		25	30	V
Ipp	Peak Pulse Current	‘tp = 8/20μs			12	A
CJ	Capacitance	VR = 0V, f = 1MHz		60	90	pF

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

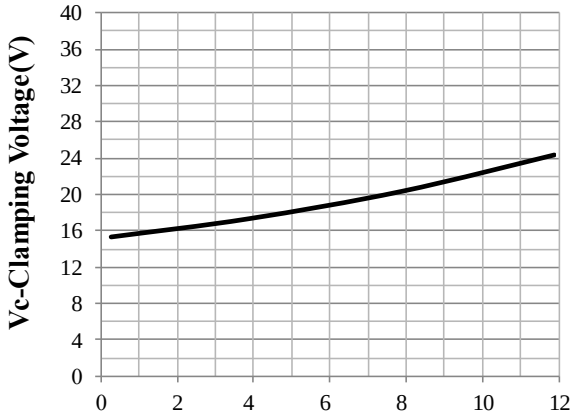
Symbol	Parameter
VRM	Stand-off voltage
VBR	Breakdown voltage
VCL	Clamping voltage
IRM	Leakage current
IPPM	Peak pulse current



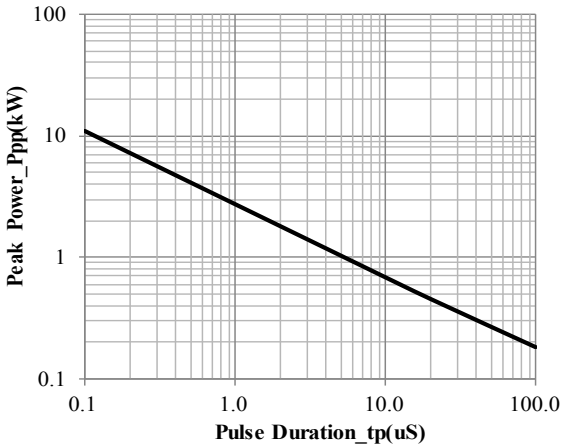
RATING AND CHARACTERISTIC CURVES



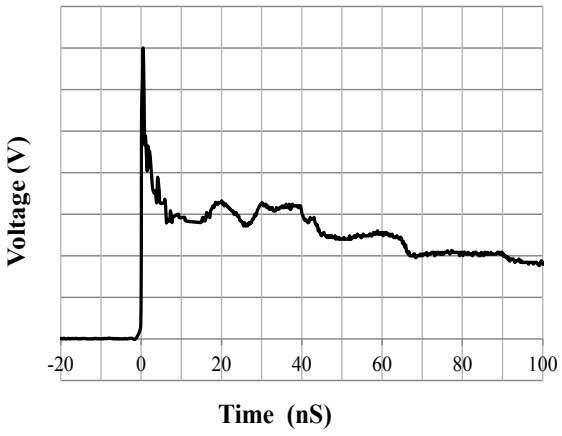
Junction Capacitance vs. Reverse Voltage



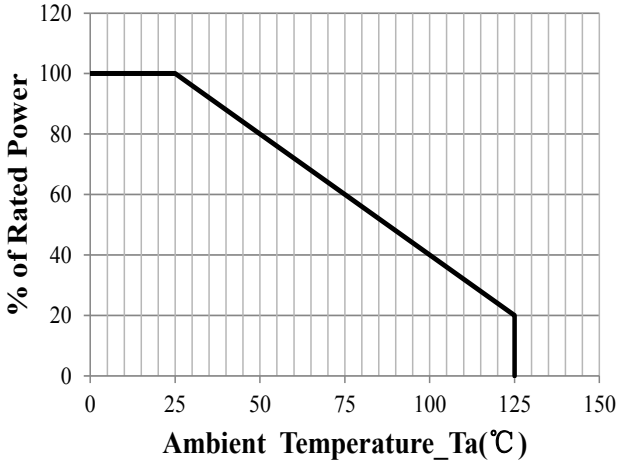
Clamping Voltage vs. Peak Pulse Current



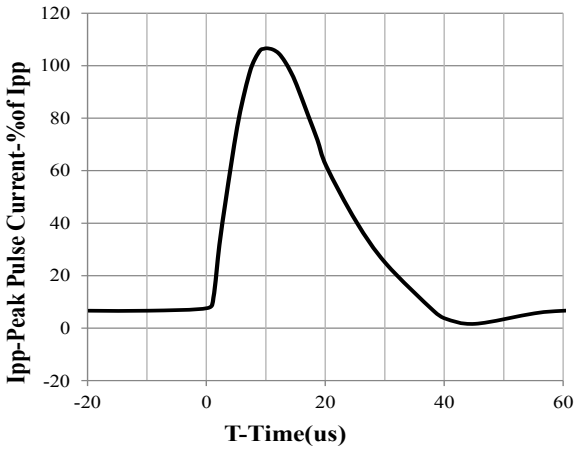
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform



Power Derating Curve

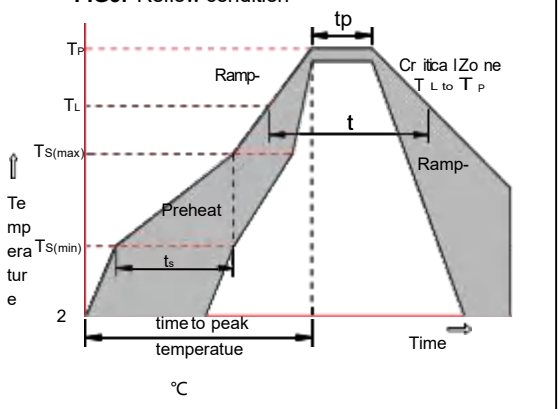


8 X 20us Pulse Waveform

Soldering parameters

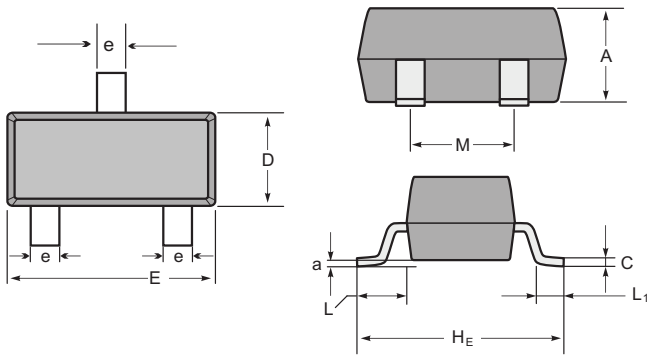
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid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

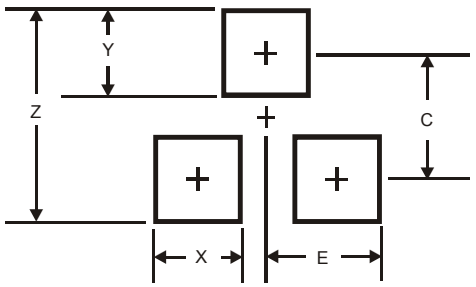
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOT23





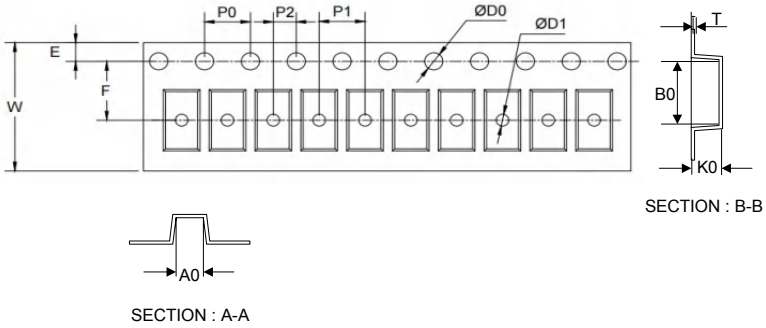
SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.15
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.0
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	6
	min	35	3	47	110	87	12	67			0.0

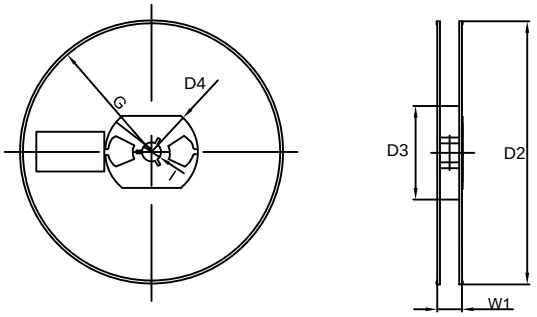
Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & rell specification

Tape



7” Reel



Symbol	Dimension (mm)
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.55±0.10
D1	1.05±0.10
E	1.55±0.10
F	3.60±0.10
W	8.00±0.10
A0	3.80±0.20
B0	3.25±0.20
K0	1.45±0.10
T	0.25±0.05
D2	178.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0
Quantity: 3000PCS	