

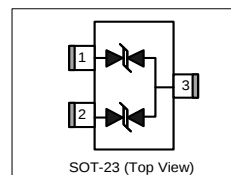
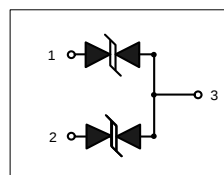
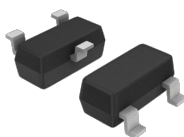
Features

80 Watts peak pulse power ($t_p = 8/20\mu s$)
 Bidirectional configurations
 Solid-state silicon-avalanche technology
 Low clamping voltage
 Low leakage current
 IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 IEC 61000-4-4 (EFT) 40A (5/50ns)
 IEC 61000-4-5 (Lightning) 8A (8/20 μs)

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

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{pp}	80	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}C$

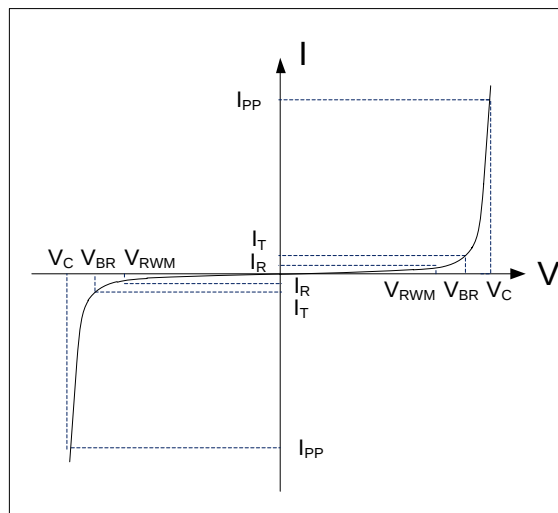
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			1.0	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			8	A
Clamping Voltage	V_C	$I_{PP}=8A, t_p=8/20\mu s$		8		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		15		pF

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

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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Note: 8/20 μs pulse waveform.



RATING AND CHARACTERISTIC CURVES

Figure 1: Peak Pulse Power vs. Pulse Time

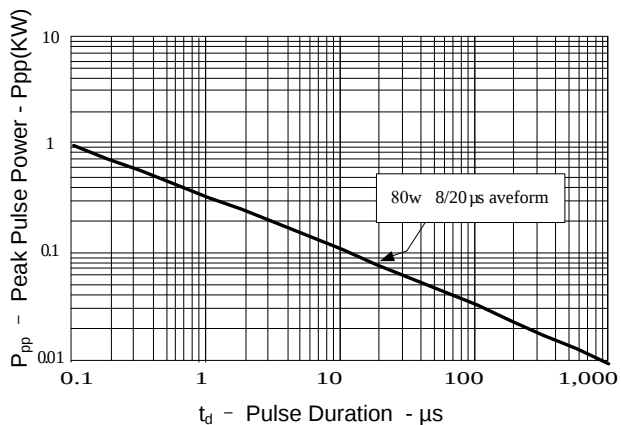


Figure 2: Power Derating Curve

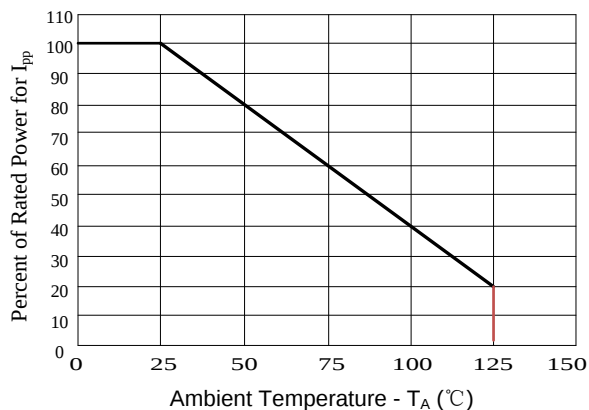


Figure3: Pulse Waveform

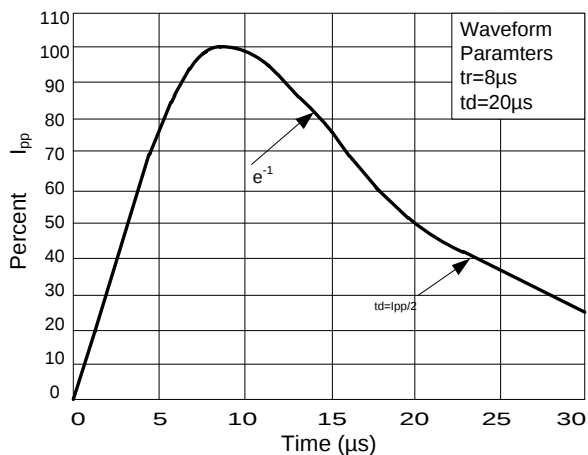
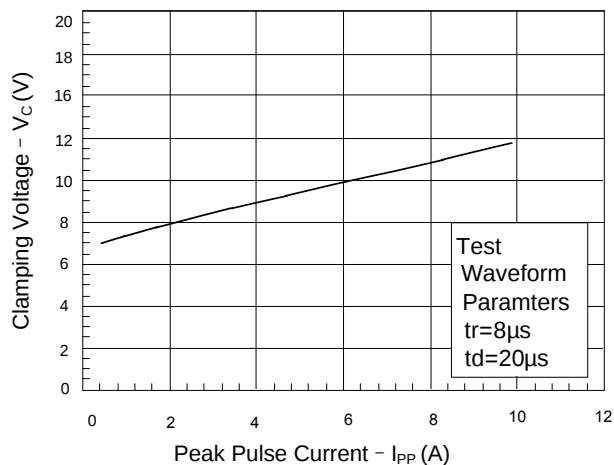
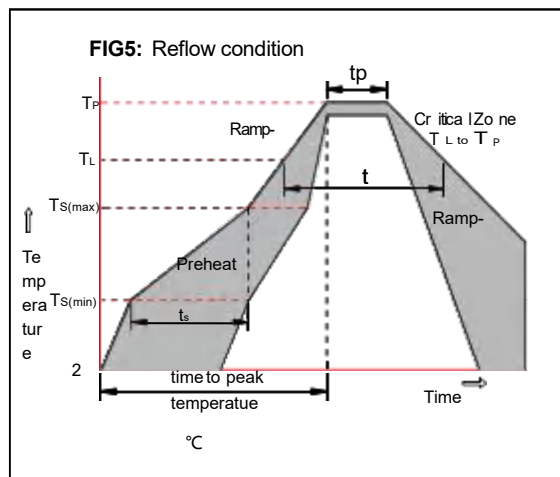


Figure 4: Clamping Voltage vs. I_pp



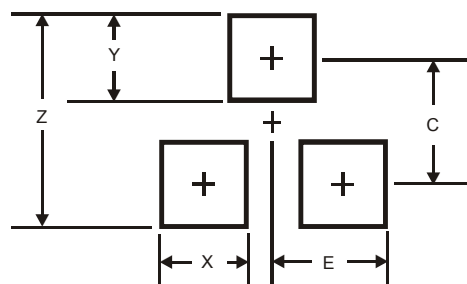
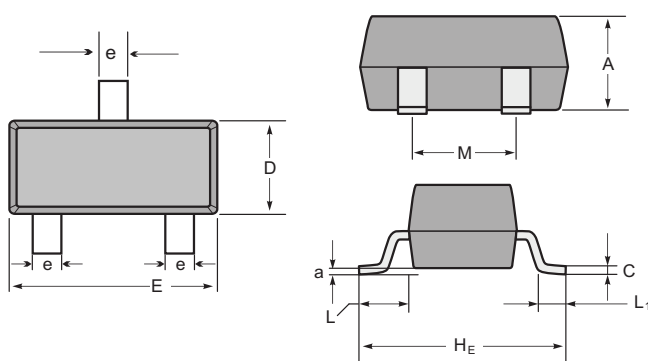
Soldering parameters

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

SOT23



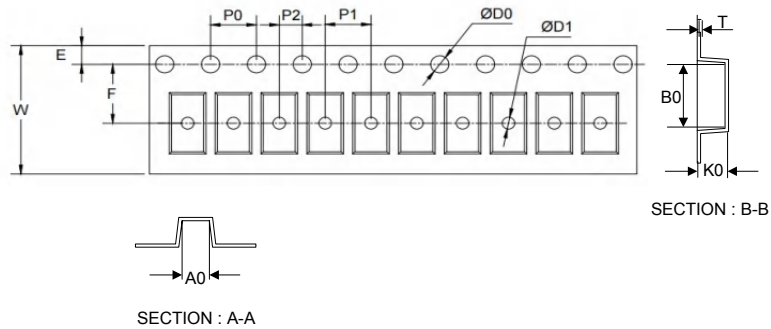
SOT-23 mechanical data

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

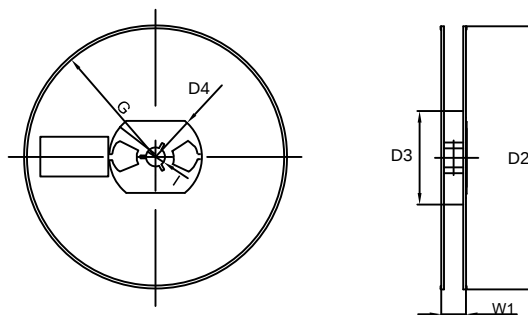
Tape & reel specification

Tape



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

7" Reel



Quantity: 3000PCS