

Features

200 Watts peak pulse power ($t_p = 8/20\mu s$)

Unidirectional and bidirectional configurations

Solid-state silicon-avalanche technology

Low clamping voltage

Low leakage current

Protection two data lines:

IEC 61000-4-2 $\pm 20kV$ contact $\pm 20kV$ air

IEC 61000-4-4 (EFT) 40A (5/50ns)

IEC 61000-4-5 (Lightning) 10A (8/20 μs)

Applications

Dataline

Automatic Teller Machines

Net works

Power line

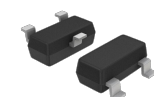
Mechanical Data

SOT-23 package

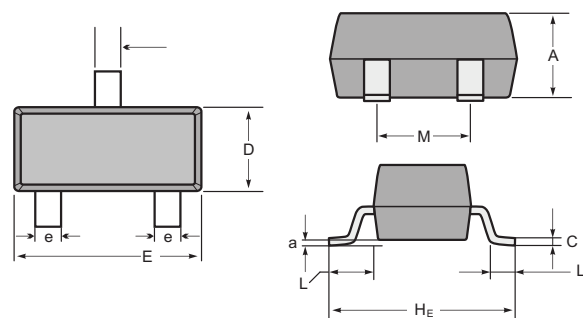
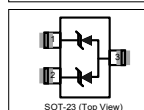
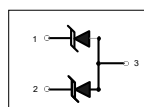
Molding compound flammability rating: UL 94V-0

Packaging: Tape and Reel

RoHS/WEEE Compliant



Schematic & PIN Configuration



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)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	200	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 20	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

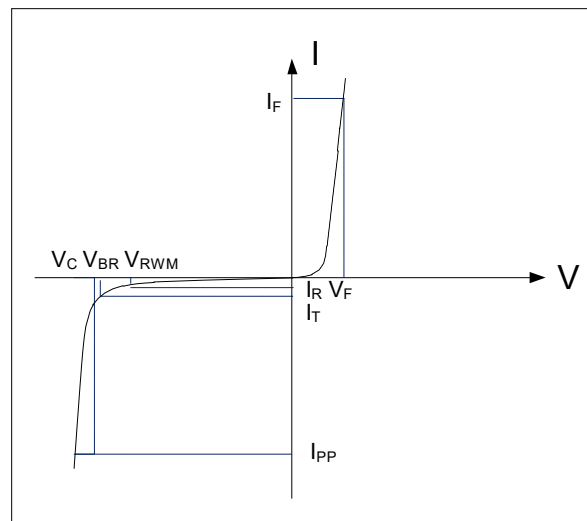
ESDA6V1L

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.2	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.1			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			1	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			10	A
Clamping Voltage	V_C	$I_{PP}=10A, t_p=8/20\mu s$		15	20	V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$ (PIN1 to PIN3)			120	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 (ESDA6V1L)

Figure 1: Peak Pulse Power vs. Pulse Time

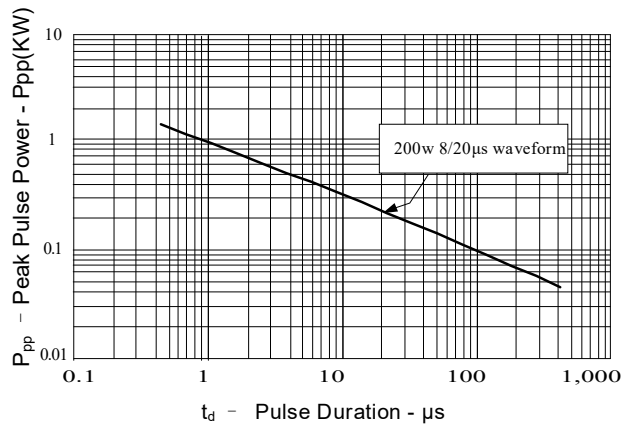


Figure 2: Power Derating Curve

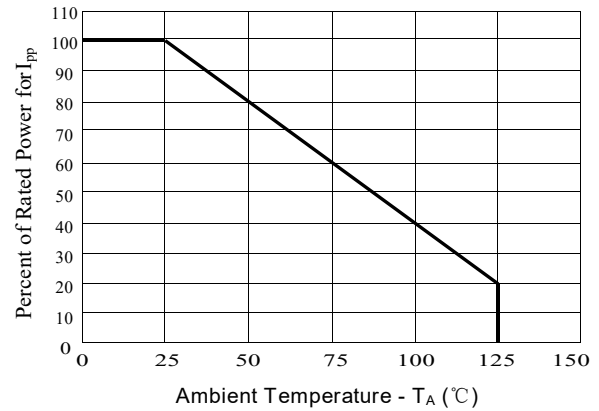


Figure3: Pulse Waveform

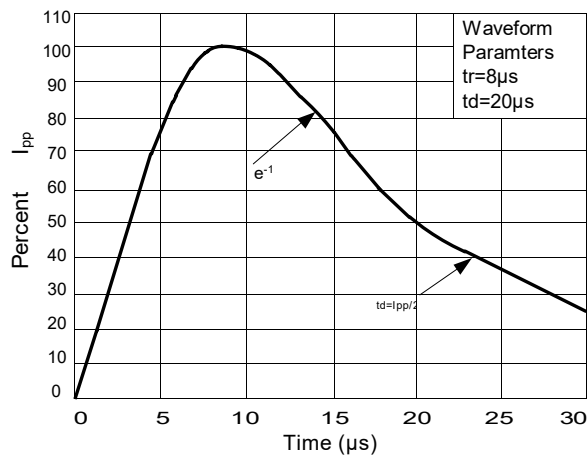


Figure 4: Clamping Voltage vs. I_pp

