

Descriptions

This is working voltage 5.0V ESD protection diode in a SOT-23 package

Features

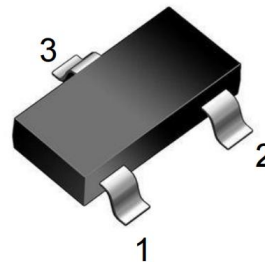
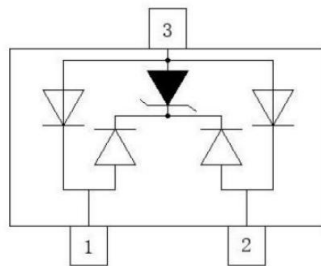
- Up to 2 lines protects
- Junction capacitance (Max value:0.8pF)
- Peak Pulse current (8/20 μ s) MAX: 5A
- IEC61000-4-2 (ESD) ± 25 kV (air), ± 20 kV (contact)
- Low leakage current
- Working voltages:5V
- RoHS Compliant

Parameter	Value	Unit
V_{RWM}	5.0	V
C_J	0.8	pF

Applications

- Automotive Applications
- CAN Bus
- Electronic Control Units
- Body Control Units
- ADAS Control Units
- PowerTrain Control Units

Equivalent Circuit & Pinning



SOT-23

Absolute Maximum Ratings(Ta=25°C)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	80	W
Peak Pulse Current (8/20μs)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±25 ±20	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	6		9	V
Reverse Leakage Current	I _R	V _R = 5V			0.2	uA
Clamping voltage	V _C	I _{PP} = 1A, T _P =8/20us, pin1 or pin2 to pin3			9	V
Clamping voltage	V _C	I _{PP} =5A, T _P =8/20us, pin1 or pin 2 to pin3			16	V
Junction capacitance	C _j	V _R =0V, f=1MHz, between I/O pins, between pin1 and pin2		0.3	0.4	pF
Junction capacitance	C _j	V _R =0V, f = 1MHz, any I/O pin to ground, between pin1 or pin2 to pin3		0.6	0.8	pF

Electrical Characteristic Curve

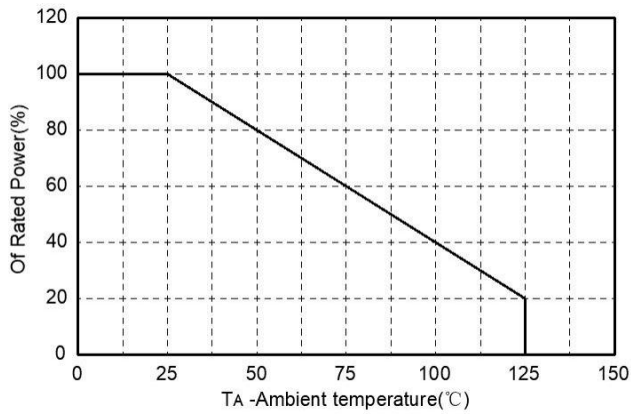


FIG1: Power rating derating curve

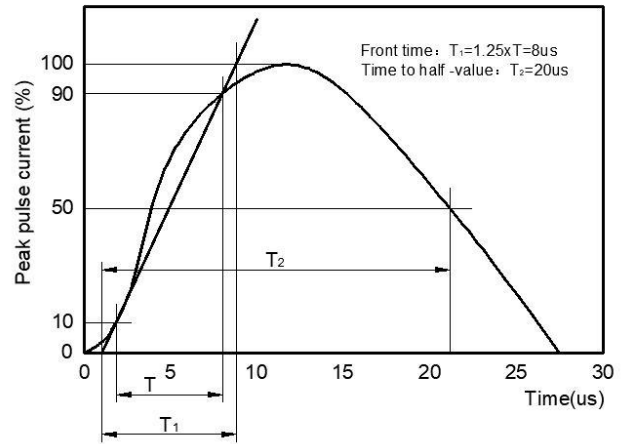


FIG2: pulse Waveform

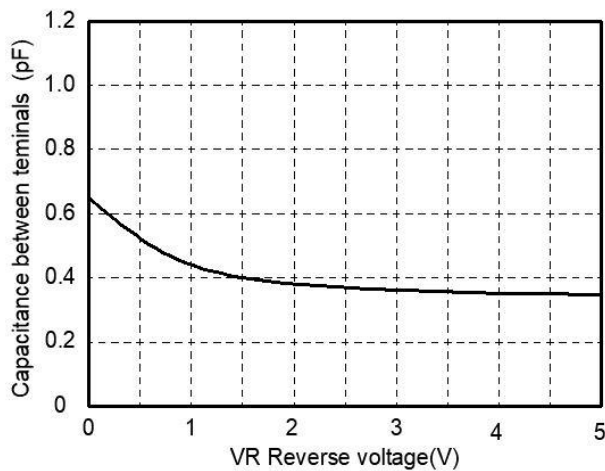
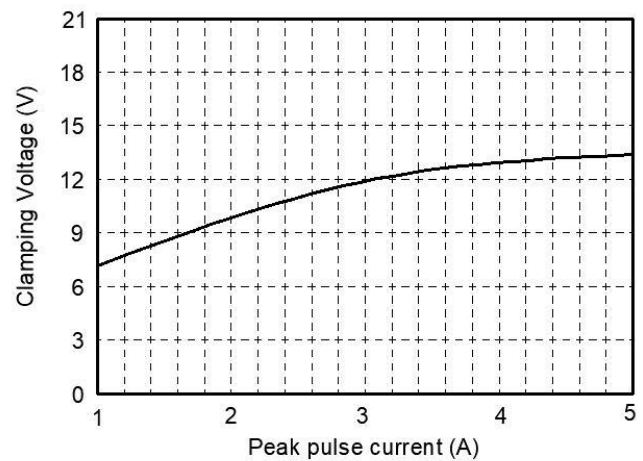
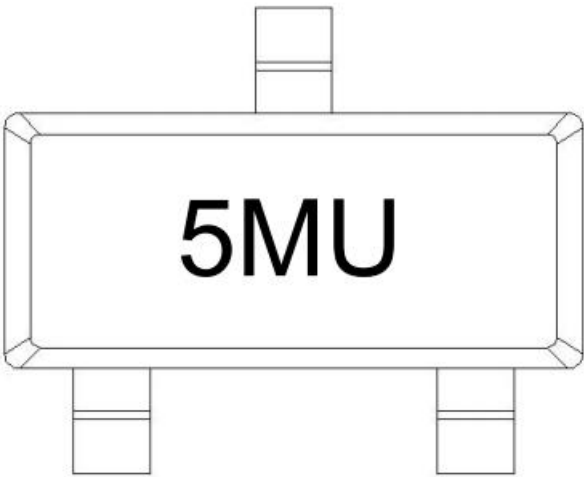
FIG3: Capacitance between terminals
characteristics

FIG4: Clamping Voltage vs. Peak Pulse Current

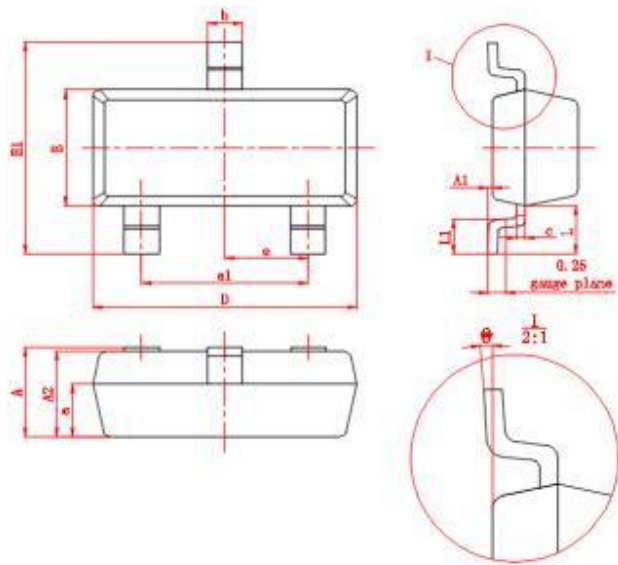
Marking Instructions



5MU= Marking Code

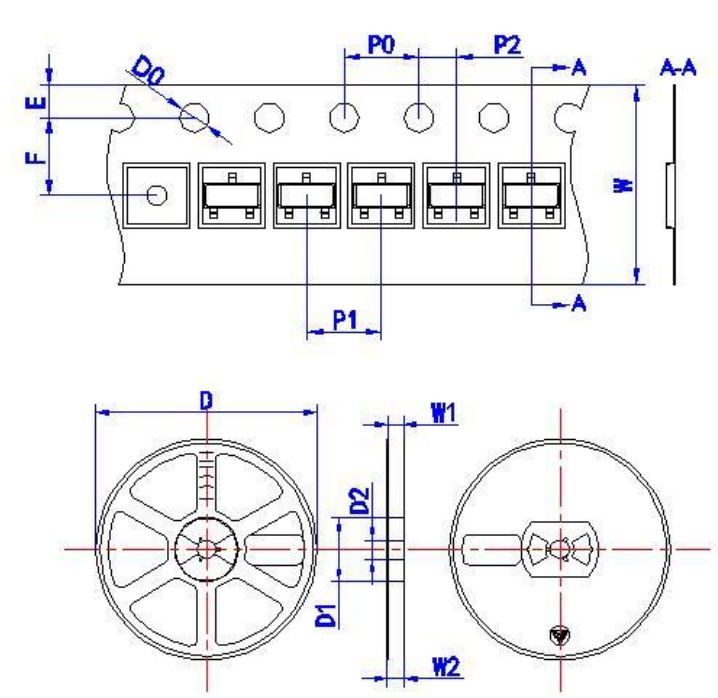
Package mechanical data

SOT-23



Symbol	Dimensional	
	Millimeters	
	min	max
A	0.9	1.15
A1	0	0.1
A2	0.9	1.05
a	(0.6)	
D	2.8	3.0
E	1.2	1.4
E1	2.25	2.55
e	(0.95)	
e1	1.8	2.0
b	0.3	0.5
c	0.08	0.15
L	(0.55)	
L1	0.3	0.5
θ	0°	8°

Tape & reel specification - SOT-23



Symbol	Dimension in Millimeters
Tape	
D0	1.50+0.10/-0.00
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
W	8.00+0.3/-0.1
Reel	
D	178.0±2.00
D1	54.40±1.00
D2	13.00±1.00
W1	9.50±1.00
W2	12.30±1.00