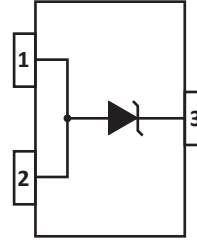
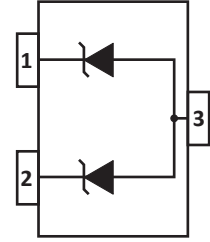


Features

- 500W peak pulse power(8/20μs)
- Protects one bi-directional or two uni-directional lines
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 27A (8/20μs)
- RoHS Compliant



UNIDIRECTIONAL



BIDIRECTIONAL

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls

Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J STD 020

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	500	W
Peak Pulse Current (8/20μs)	I _{PP}	27	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR			0.1	μA	VRWM = 5V
Forward Voltage	VF		0.8	1.2	V	IF = 10mA
Clamping Voltage	VC		7		V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	VC			20	V	I _{PP} = 27A (8 x 20μs pulse)
Junction Capacitance	CJ			200	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3
Junction Capacitance	CJ		90		pF	VR=0, f=1MHz, Pin 1 to Pin 2

Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

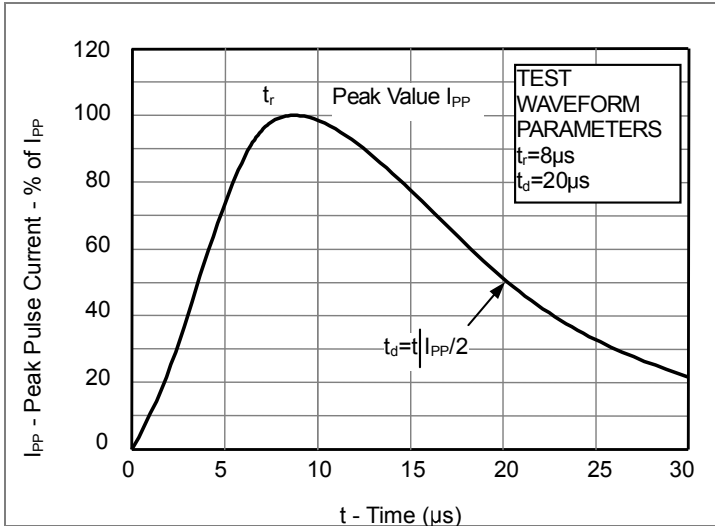


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

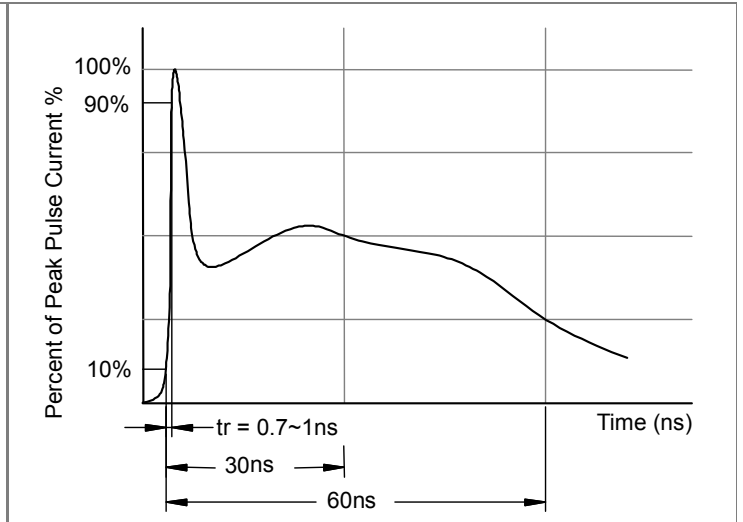
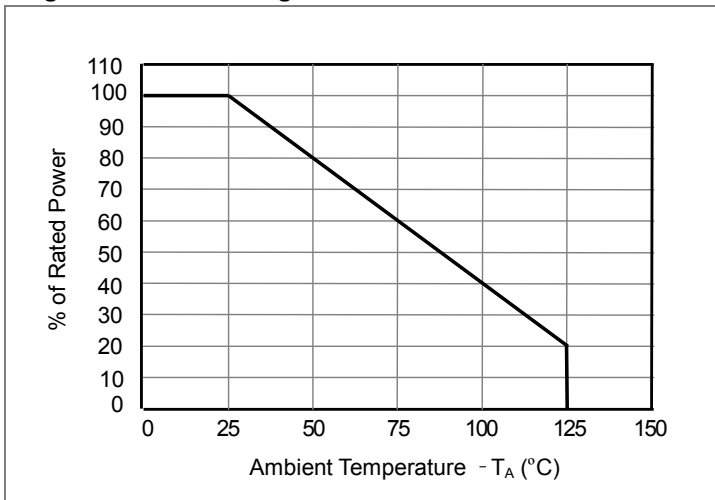
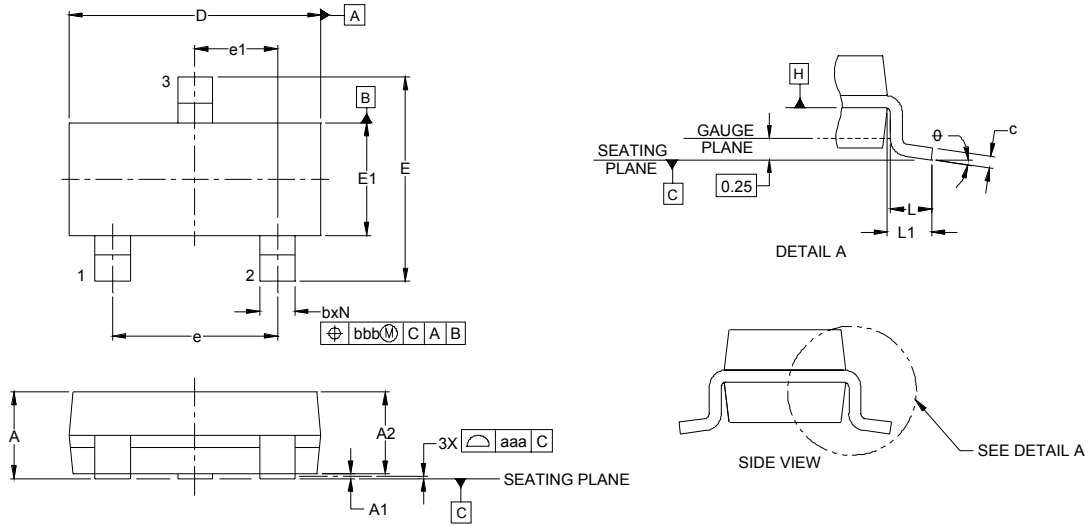


Fig3. Power Derating Curve

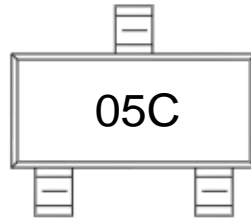


Outline Drawing - SOT-23



DIM	INCHES		MILLIMETERS	
	MIN	NOM/MAX	MIN	NOM/MAX
A	.035	-.044	0.89	- 1.12
A1	.000	-.004	0.01	- 0.10
A2	.035	.037	0.88	0.95
b	.012	-.020	0.30	- 0.51
c	.003	-.007	0.08	- 0.18
D	.110	.114	2.80	2.90
E	.082	.093	2.10	2.37
E1	.047	.051	1.20	1.30
e	.075		1.90	BSC
e1	.037		0.95	BSC
L	.015	.020	0.40	0.50
L1	.022		(0.55)	
N	3		3	
-φ	0°	8°	0°	8°
aaa	.004		0.10	
bbb	.008		0.20	

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW PSOT05C-LF-T7	SOT-23	3000	Tape and reel