

Low capacitance bi-directional double ESD protection diode

PESD5V0S2BT

FEATURES

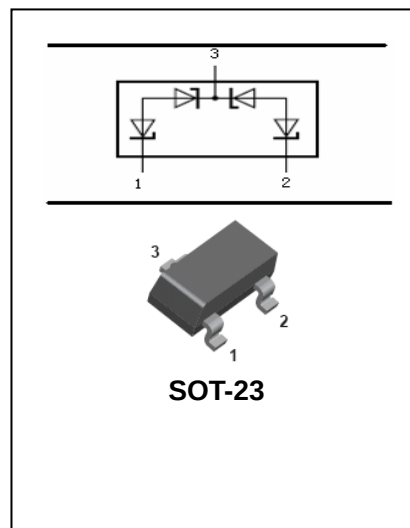
- Bi-directional ESD protection of 2 lines.
- Low diode capacitance.
- Max. peak pulse power: $P_{PP}=130W$ at $t_p=8/20ms$.
- Low clamping voltage: $V_{CL(R)}=14V$ at $I_{PP}=12A$.
- Ultra low leakage current: $I_{RM}=5nA$ at $V_{RWM}=5V$.
- ESD protection > 30 kV



Lead-free

APPLICATIONS

- Cellular handsets and accessories
- Portable electronics
- Computers and peripherals
- Communication systems
- Audio and video equipment



SOT-23

ORDERING INFORMATION

Type No.	Marking	Package Code
PESD5V0S2BT	G5	SOT-23

MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{RWM}	Reverse stand-off voltage	5	V
C_d	Diode capacitance	35	pF
P_{PP}	peak pulse power(8/20 μs pulse)	130	W
I_{PP}	peak pulse current(8/20 μs pulse)	12	A
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	$^{\circ}C$

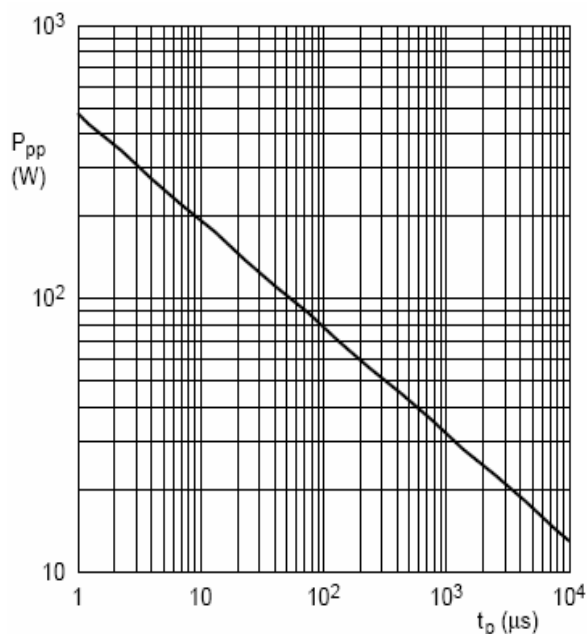
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
reverse stand-off voltage	V_{RWM}				5	V
reverse leakage current	I_{RM}	$V_{RWM}=5V$		5	100	nA
clamping voltage	$V_{(CL)R}$	$I_{PP}=1A$			10	V
		$I_{PP}=12A$			14	V
breakdown voltage	V_{BR}	$I_R=1mA$	5.5		9.5	V
Differential resistance	r_{diff}	$I_R=1mA$			50	Ω

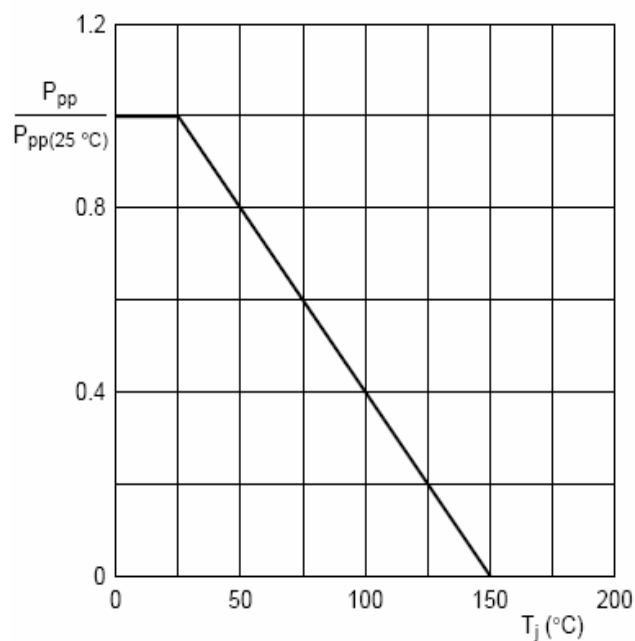
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



$T_{amb} = 25\text{ }^{\circ}C$.

$t_p = 8/20\text{ }\mu s$ exponential decay waveform;

Peak pulse power dissipation as a function of pulse time; typical values.

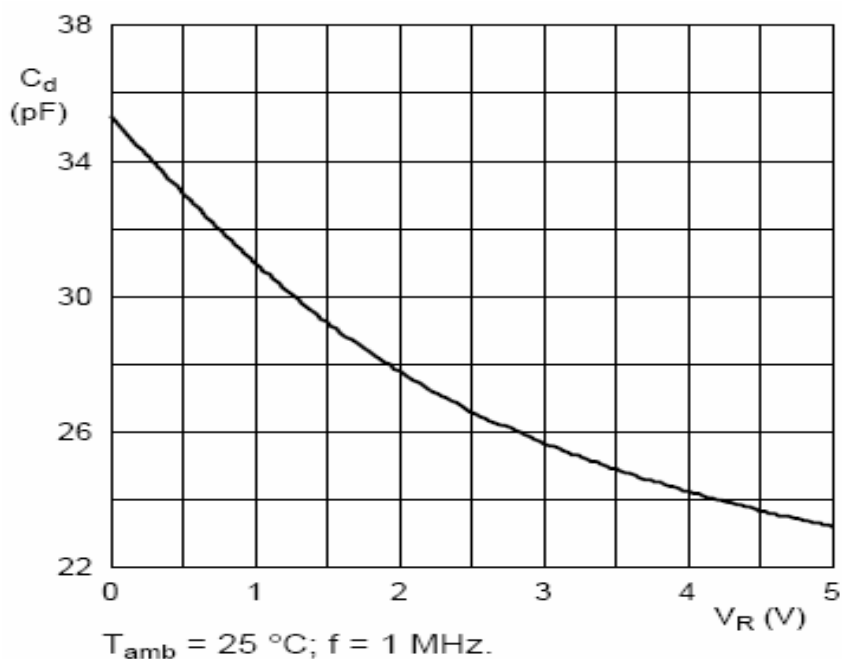


$T_{amb} = 25\text{ }^{\circ}C$.

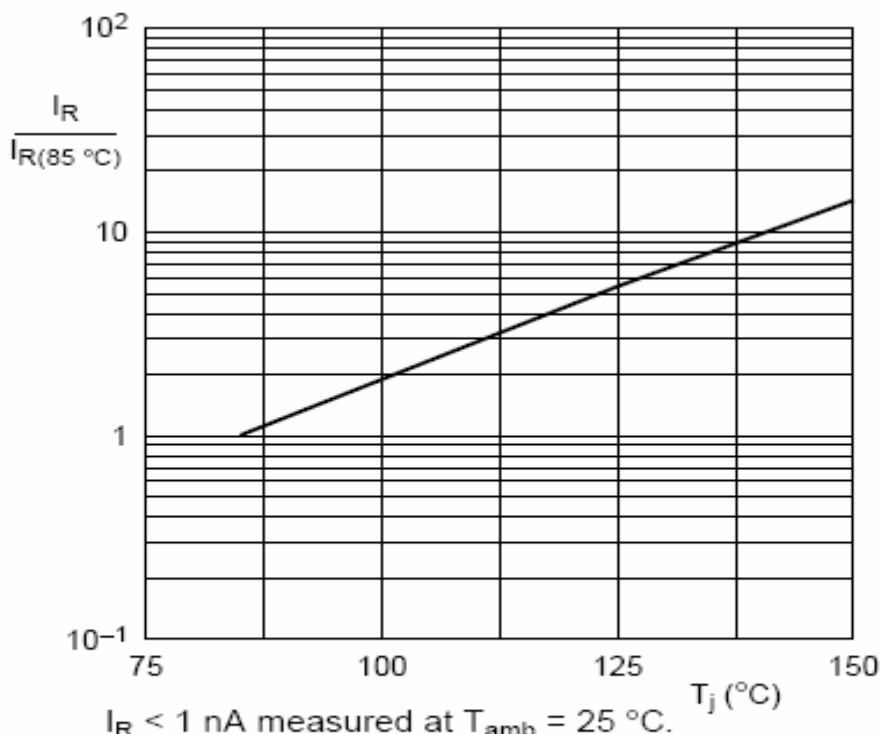
Relative variation of peak pulse power as a function of junction temperature; typical values.

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Diode capacitance as a function of reverse voltage; typical values.



Relative variation of reverse leakage current as a function of junction temperature; typical values.

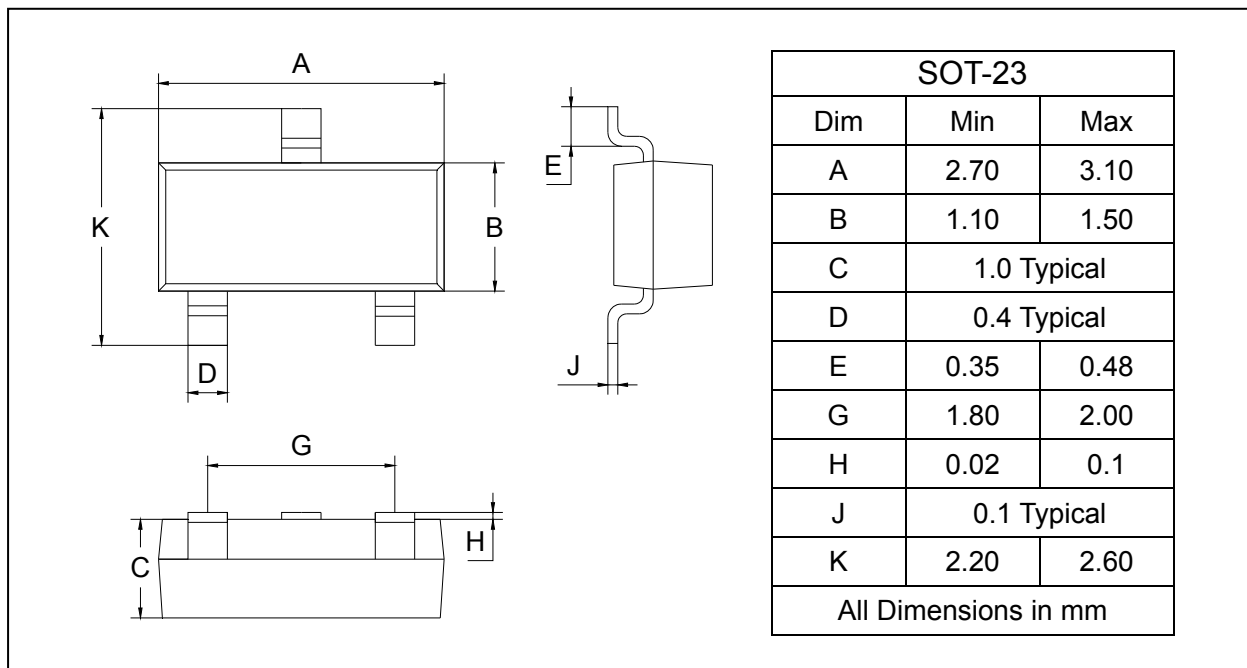
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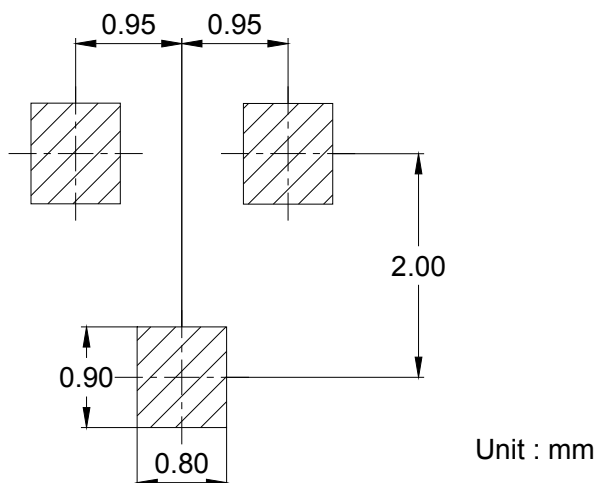
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
PESD5V0S2BT	SOT-23	3000/Tape&Reel