

## Vishay Semiconductors

ABSOLUTE MAXIMUM RATINGS VESD01-02V					
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT	
Peak pulse current	Acc. IEC 61000-4-5, 8/20 µs/single shot	I <sub>PPM</sub>	7	А	
Peak pulse power	Acc. IEC 61000-4-5, 8/20 µs/single shot	P <sub>PP</sub>	63	W	
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	M	± 8	kV	
ESD minumity	Air discharge acc. IEC 61000-4-2; 10 pulses	V <sub>ESD</sub>	± 15	kV	
Operating temperature	Junction temperature	TJ	-40 to +125	°C	
Storage temperature		T <sub>stg</sub>	-55 to +150	°C	

ABSOLUTE MAXIMUM RATINGS VESD03-02V				
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	Acc. IEC 61000-4-5, 8/20 µs/single shot	I <sub>PPM</sub>	9	A
Peak pulse power	Acc. IEC 61000-4-5, 8/20 µs/single shot	P <sub>PP</sub>	108	W
	Contact discharge acc. IEC 61000-4-2; 10 pulses	V	± 8	kV
ESD immunity	Air discharge acc. IEC 61000-4-2; 10 pulses	V <sub>ESD</sub>	± 15	kV
Operating temperature	Junction temperature	TJ	-40 to +125	°C
Storage temperature		T <sub>stg</sub>	-55 to +150	°C

ABSOLUTE MAXIMUM RATINGS VESD05-02V					
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT	
Peak pulse current	Acc. IEC 61000-4-5, 8/20 µs/single shot	I <sub>PPM</sub>	6	A	
Peak pulse power	Acc. IEC 61000-4-5, 8/20 µs/single shot	P <sub>PP</sub>	120	W	
	Contact discharge acc. IEC 61000-4-2; 10 pulses	M	± 8	kV	
ESD immunity	Air discharge acc. IEC 61000-4-2; 10 pulses	V <sub>ESD</sub>	± 15	kV	
Operating temperature	Junction temperature	TJ	-40 to +125	°C	
Storage temperature		T <sub>stg</sub>	-55 to +150	°C	

ABSOLUTE MAXIMUM RATINGS VESD08-02V					
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT	
Peak pulse current	Acc. IEC 61000-4-5, 8/20 µs/single shot	I <sub>PPM</sub>	4	A	
Peak pulse power	Acc. IEC 61000-4-5, 8/20 µs/single shot	P <sub>PP</sub>	120	W	
	Contact discharge acc. IEC 61000-4-2; 10 pulses	M	± 8	kV	
ESD immunity	Air discharge acc. IEC 61000-4-2; 10 pulses	V <sub>ESD</sub>	± 15	kV	
Operating temperature	Junction temperature	TJ	-40 to +125	°C	
Storage temperature		T <sub>stg</sub>	-55 to +150	°C	

ABSOLUTE MAXIMUM RATINGS VESD12-02V					
PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT	
Peak pulse current	Acc. IEC 61000-4-5, 8/20 µs/single shot	I <sub>PPM</sub>	2	A	
Peak pulse power	Acc. IEC 61000-4-5, 8/20 µs/single shot	P <sub>PP</sub>	25	W	
	Contact discharge acc. IEC 61000-4-2; 10 pulses	M	± 8	kV	
ESD immunity	Air discharge acc. IEC 61000-4-2; 10 pulses	V <sub>ESD</sub>	± 15	kV	
Operating temperature	Junction temperature	TJ	-40 to +125	°C	
Storage temperature		T <sub>stg</sub>	-55 to +150	°C	

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	ELECTRICAL CHARACTERISTICS VESD01-02V (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N <sub>channel</sub>	-	-	1	lines
Reverse stand-off voltage	Max. reverse working voltage	V <sub>RWM</sub>	-	-	1	V
Reverse voltage	at I <sub>R</sub> = 100 μA	V <sub>R</sub>	1	-	-	V
Reverse current	at V <sub>R</sub> = 1 V	I <sub>R</sub>	-	-	100	μA
Reverse breakdown voltage	at I <sub>R</sub> = 1 mA	V <sub>BR</sub>	1.5	-	-	V
Reverse clamping voltage	at I <sub>PP</sub> (see fig. 1)	V <sub>C</sub>	-	9	-	V
Capacitance	at V <sub>R</sub> = 0 V; f = 1 MHz	C <sub>D</sub>	-	180	-	pF

	ELECTRICAL CHARACTERISTICS VESD03-02V (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N <sub>channel</sub>	-	-	1	lines
Reverse stand-off voltage	Max. reverse working voltage	V <sub>RWM</sub>	-	-	3	V
Reverse voltage	at I <sub>R</sub> = 20 μA	V <sub>R</sub>	3	-	-	V
Reverse current	at V <sub>R</sub> = 3 V	I <sub>R</sub>	-	-	20	μA
Reverse breakdown voltage	at I <sub>R</sub> = 1 mA	V <sub>BR</sub>	4	-	-	V
Reverse clamping voltage	at I <sub>PP</sub> (see fig. 1)	V <sub>C</sub>	-	12	-	V
Capacitance	at $V_R = 0 V$ ; f = 1 MHz	CD	-	110	-	pF

ELECTRICAL CHARACTERISTICS VESD05-02V (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N <sub>channel</sub>	-	-	1	lines
Reverse stand-off voltage	Max. reverse working voltage	V <sub>RWM</sub>	-	-	5	V
Reverse voltage	at I <sub>R</sub> = 0.1 μA	V <sub>R</sub>	5	-	-	V
Reverse current	at V <sub>R</sub> = 5 V	I <sub>R</sub>	-	-	0.1	μA
Reverse breakdown voltage	at I <sub>R</sub> = 1 mA	V <sub>BR</sub>	6.5	-	-	V
Reverse clamping voltage	at I <sub>PP</sub> (see fig. 1)	V <sub>C</sub>	-	20	-	V
Capacitance	at $V_R = 0 V$ ; f = 1 MHz	CD	-	55	-	pF

ELECTRICAL CHARACTERISTICS VESD08-02V (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N <sub>channel</sub>	-	-	1	lines
Reverse stand-off voltage	Max. reverse working voltage	V <sub>RWM</sub>	-	-	8	V
Reverse voltage	at I <sub>R</sub> = 0.1 μA	V <sub>R</sub>	8	-	-	V
Reverse current	at V <sub>R</sub> = 8 V	I <sub>R</sub>	-	-	0.1	μA
Reverse breakdown voltage	at I <sub>R</sub> = 1 mA	V <sub>BR</sub>	9	-	-	V
Reverse clamping voltage	at I <sub>PP</sub> (see fig. 1)	V <sub>C</sub>	-	30	-	V
Capacitance	at $V_R = 0 V$ ; f = 1 MHz	CD	-	35	-	pF

ELECTRICAL CHARACTERISTICS VESD12-02V (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N <sub>channel</sub>	-	-	1	lines
Reverse stand-off voltage	Max. reverse working voltage	V <sub>RWM</sub>	-	-	12	V
Reverse voltage	at I <sub>R</sub> = 0.1 μA	V <sub>R</sub>	12	-	-	V
Reverse current	at V <sub>R</sub> = 12 V	I <sub>R</sub>	-	-	0.1	μA
Reverse breakdown voltage	at I <sub>R</sub> = 1 mA	V <sub>BR</sub>	14	-	-	V
Reverse clamping voltage	at I <sub>PP</sub> (see fig. 1)	V <sub>C</sub>	-	25	-	V
Capacitance	at $V_R = 0 V$ ; f = 1 MHz	CD	-	30	-	pF

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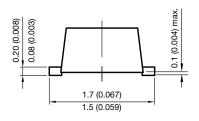
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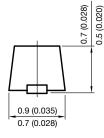
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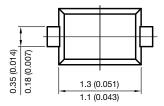


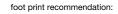
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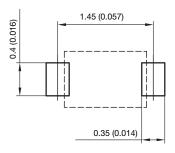
## PACKAGE DIMENSIONS in millimeters (Inches): SOD-523











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