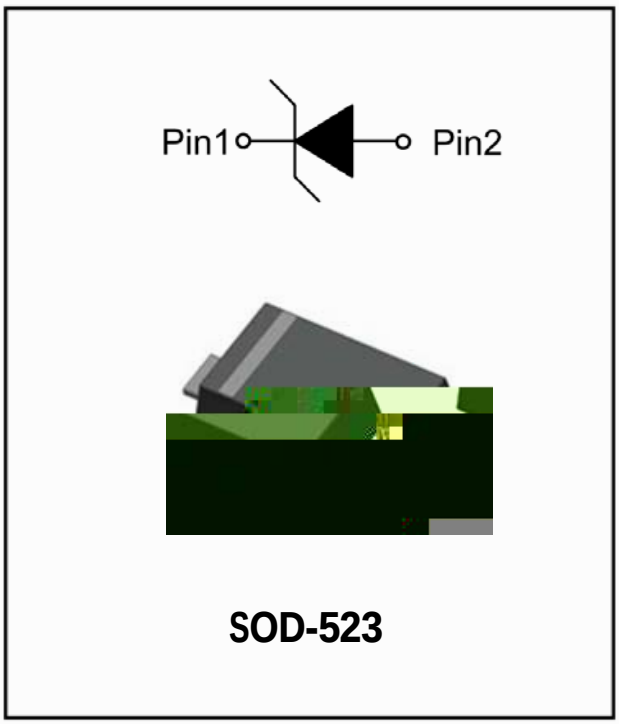
1- Line, Uni-directional, ESD protection diode



Features

- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV contact, ±30kV air
  IEC61000-4-5:7A(tp=8/20μs)
- Low leakage current
- Ultra low clamping voltage
- RoHS Compliant
- Part no. with suffix “Q” means AEC-Q101 qualified

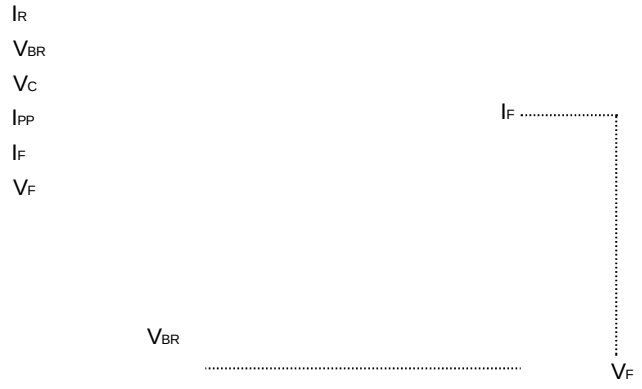
Applications

- Switches / Buttons
- Test Equipment/Instrumentation
- Point-of-Sale Terminals
- Medical Equipment
- Notebooks / Desktops / Servers
- Computer Peripherals
- CAN Bus protection
- Automotive applications

Mechanical Data

- Package: SOD-523
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound

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■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	300	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T_J	-55~150	
Storage temperature	T_{STG}	-55~150	

Notes:

CAUTION: Stresses above those listed in “Absolute Maximum Ratings” may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

■Electrical Characteristics T_J=25

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V_{RWM}	V	$I_R \leq$ 1μA			24
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	26.7		
Reverse leakage current	I_R	μA	V_{RWM} = 24V			1.0
Forward Voltage	V_F	V	I_F=10mA			1.1
Clamping voltage [1)]	V_C	V	I_{PP} = 1A, t_p = 8/20μs			32
			I_{PP} = 5A, t_p = 8/20μs			42
			I_{PP} = 7A, t_p = 8/20μs			44
Dynamic resistance [2)]	R_{DYN}	Ω	TLP, tp=100ns, I/O to Ground		0.36	
Peak Pulse Current	I_{PP}	A	t_p = 8/20μs			7
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		35	50

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5.

(2). TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD24VD5Q	F2	Approximate 2	8000	80000	320000	7 reel

■ Characteristics (Typical)

Fig.2: Capacitance vs. Bias

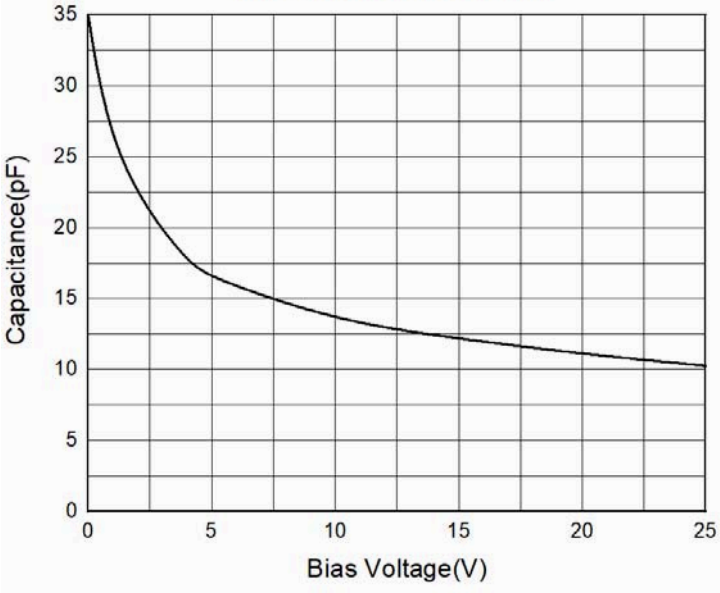
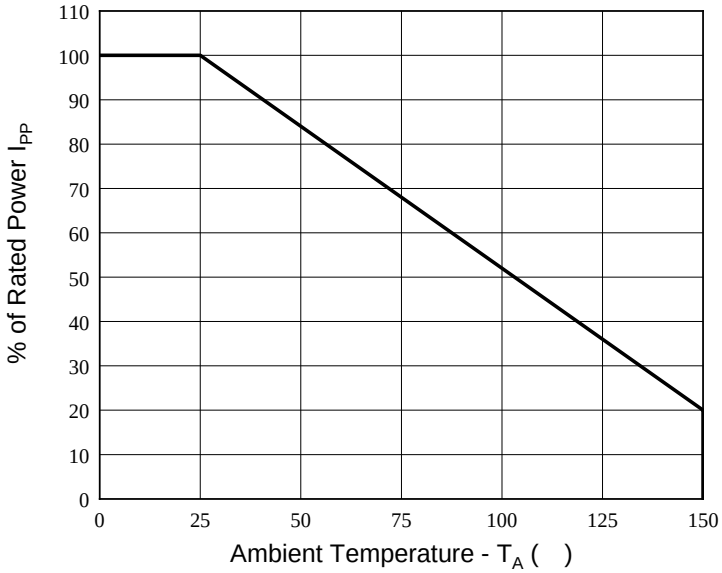
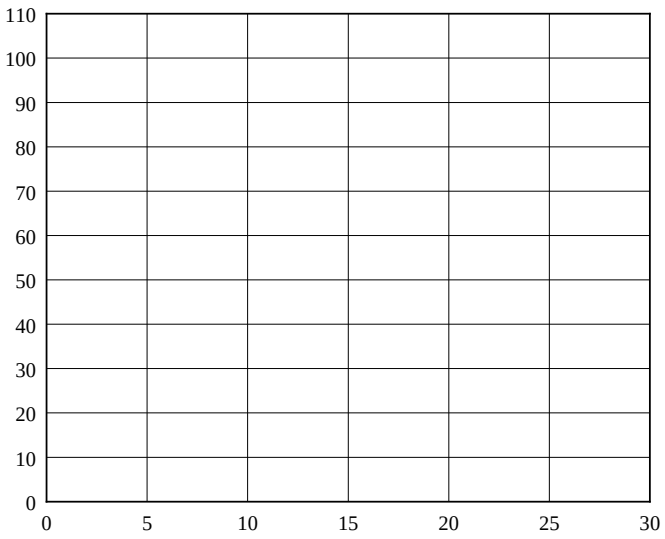
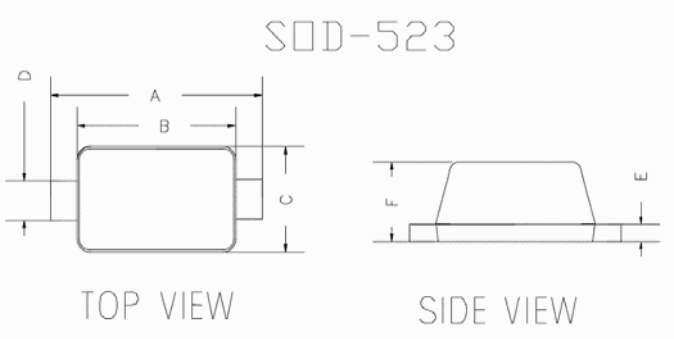


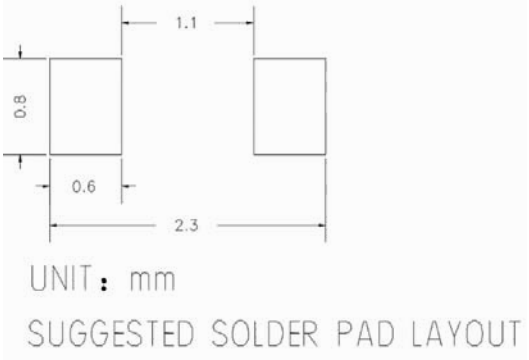
Fig.3: Power Derating Curve





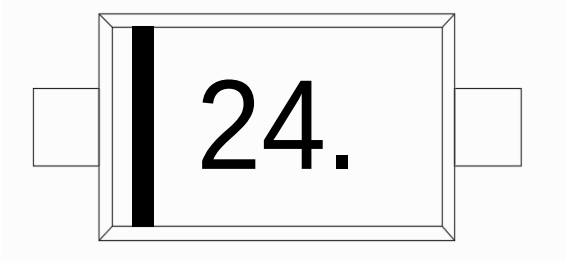
■ Outline Dimensions





DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	0.059	0.067	1.500	1.700
B	0.043	0.051	1.100	1.300
[illegible]		C	[illegible]	[illegible]
[illegible]		D	[illegible]	[illegible]
0.200		E	0.002	0.008	0.050
0.700		F	0.020	0.028	0.500

■ Marking Information



Note:
1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black