

FEATURES

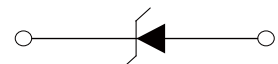
- | 350 Watts Peak Pulse Power per (tp=8/20μs)
- | Protects one I/O line (unidirectional)
- | Low clamping voltage
- | Working voltages: 3.3V to 36V
- | Low leakage current



SOD-323

APPLICATIONS

- | Cell Phone Handsets and Accessories
- | Microprocessor based equipment
- | Personal Digital Assistants (PDA's)
- | Notebooks, Desktops, and Servers
- | Portable Instrumentation
- | Networking and Telecom
- | Serial and Parallel Ports
- | Peripherals



Schematic Symbol

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30KV (Contact) ±30KV (Air)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	±30	KV
V_{ESD}	ESD per IEC 61000-4-2 (Air)	±30	KV
P_{pp}	Peak Pulse Power (8/20μs)	350	W
T_{OPT}	Operating Temperature	-55~+150	°C
T_{STG}	Storage Temperature	-55~+150	°C
T_L	Lead Soldering Temperature	260 (10 sec.)	°C

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Part Number	Marking	V_{RWM} (V)	V_B (V)	I_T (mA)	$V_C@1A$ (V)	V_C (V)		I_R (μA)	C_J (pF)
		Max.	Min.		Max.	Max.	(@A)	Max.	Max.
SD03	03W	3.3	4	1	6.5	14	20	40	450
SD05	05W	5	6	1	9.8	18	17	10	300
SD08	08W	8	8.5	1	10.5	24	15	1	240
SD12	12W	12	13.3	1	19	32	11	1	130
SD15	15W	15	16.7	1	24	38	10	1	120
SD18	18W	18	20.0	1	29	45	9	1	100
SD20	20W	20	22.3	1	35	50	8	1	90
SD24	24W	24	26.7	1	43	52	7	1	80
SD36	36W	36	40	1	60	75	5	1	60

CHARACTERISTIC CURVES

Figure1: 8/20 μs Waveform per IEC61000-4-5

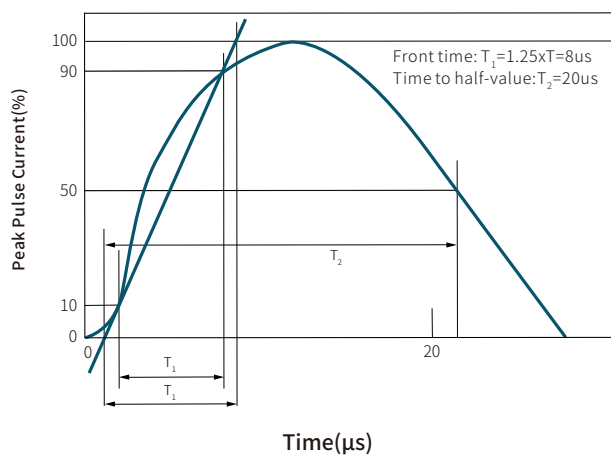


Figure2: Contact Discharge Current Waveform per IEC 61000-4-2

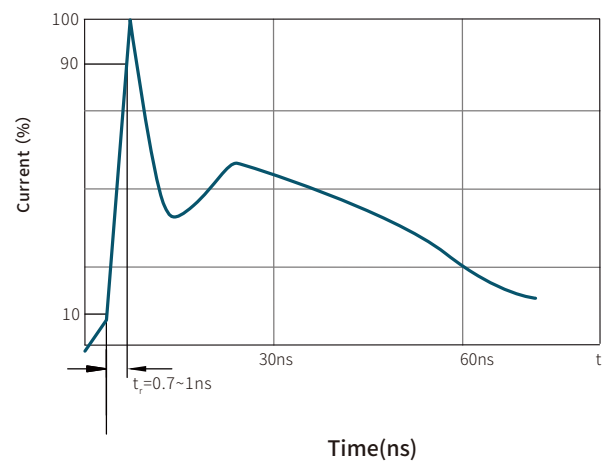
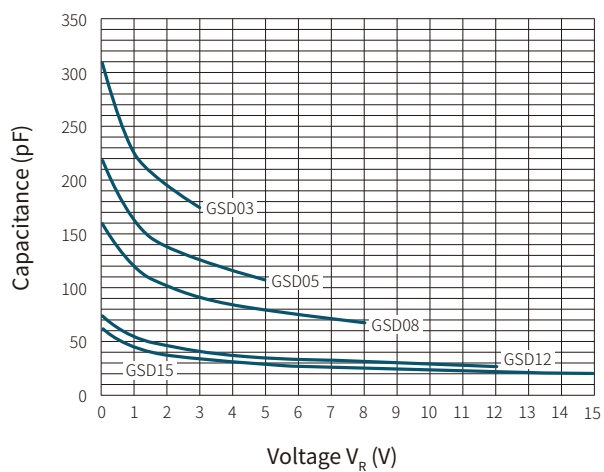
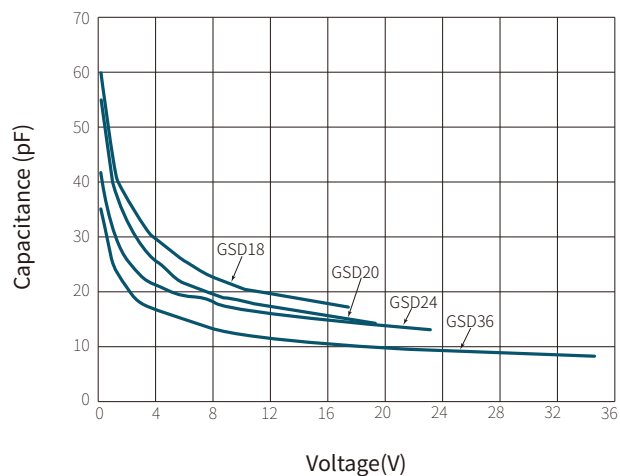
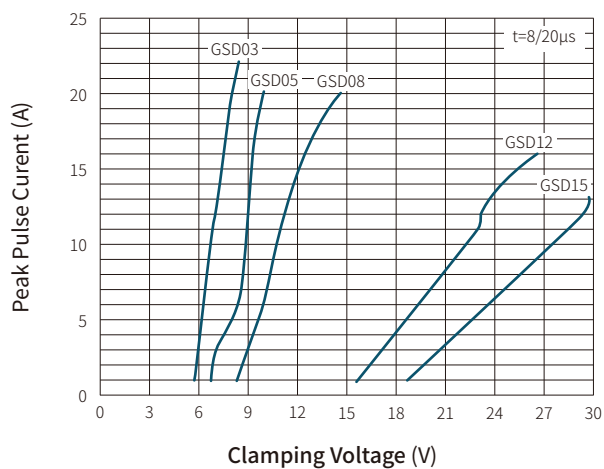
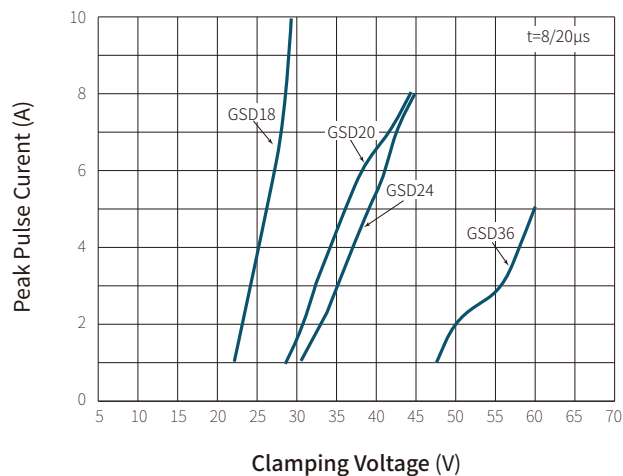
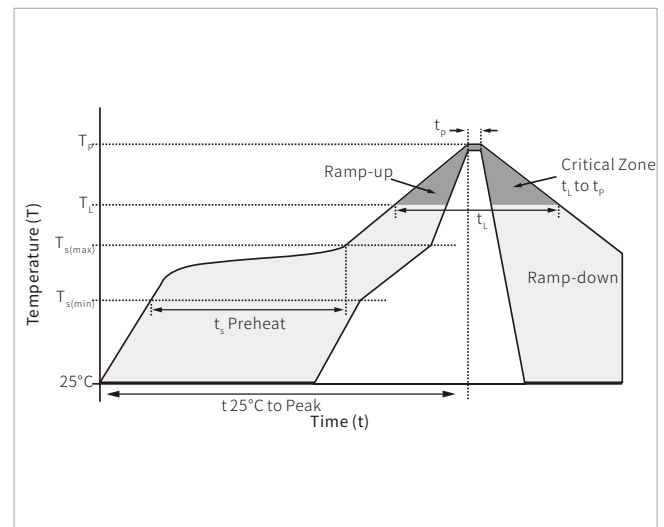


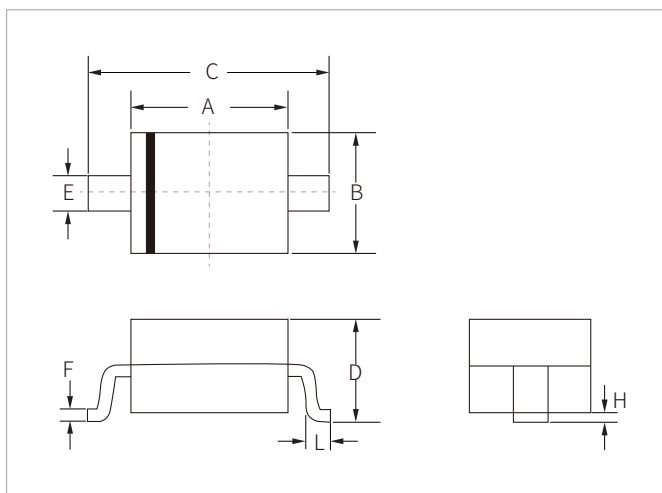
Figure3: Voltage vs Capacitance

Figure4: Voltage vs Capacitance

Figure5: Clamping Voltage vs Peak Pulse Current

Figure6: Clamping Voltage vs Peak Pulse Current


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

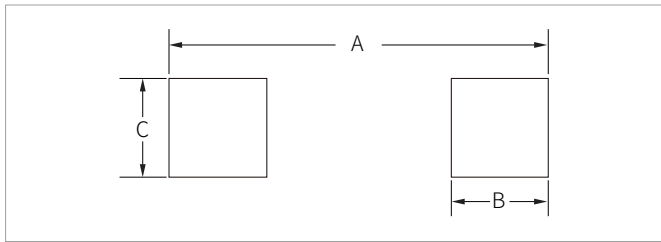


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.75	0.093	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SD03-SD36	SOD-323	3000PCS	7"

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