

DESCRIPTION

Brightking's SDD32A05L01 is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

It is designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD), electrical fast transients (EFT), and cable discharge events (CDE).

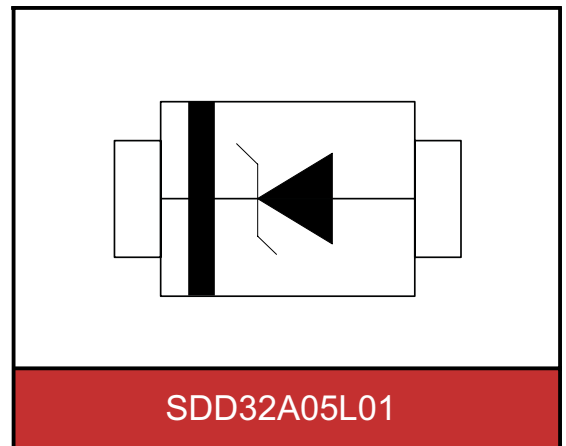


HBM : ±8kV
Air Mode : ±15kV



SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15KV Air, 8KV contact compliance
- SOD-323 surface mount package
- Protects one I/O line
- Peak power dissipation of 320W under 8/20 μ s waveform
- Working voltage : 5V
- Low leakage current
- Low clamping voltage
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature: Pure Tin-Sn, 260-270°C
- Flammability rating UL 94V-0



APPLICATIONS

- Cellular handsets & Accessories
- Cordless phones
- Personal digital assistants (PDAs)
- Notebooks & Handhelds
- Portable instrumentation
- Digital cameras
- Peripherals
- MP3 players

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak pulse power (tp=8/20μs waveform)	Ppp	320	W
ESD voltage (HBM contact)	V _{ESD}	±8	KV
ESD voltage (AIR contact)		±15	
Storage & operating temperature range	T _{STG} , T _J	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_J=25°C)

SDD32A05L01 (Marking : 05W)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V _{RWM}				5	V
Reverse breakdown voltage	V _{BR}	I _{BR} =1mA	6			V
Reverse leakage current	I _R	V _R =5V			10	μA
Clamping voltage (tp=8/20μs)	V _C	I _{PP} =1A			9.8	V
Off state junction capacitance	C _J	0Vdc, f=1MHZ between I/O pins and GND			350	pF

TYPICAL CHARACTERISTICS CURVES

Figure 1. Power Derating Curve

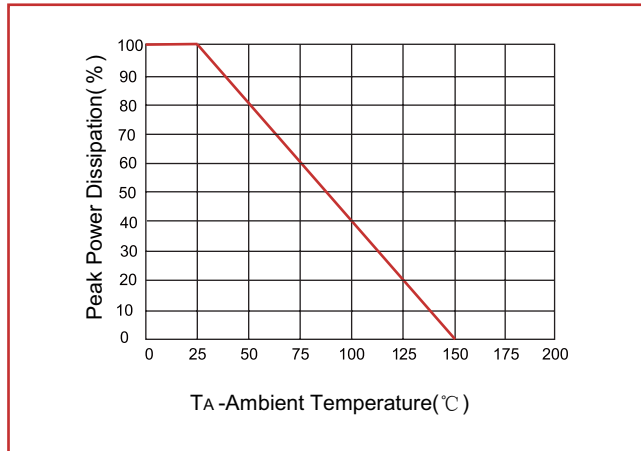


Figure 2. Pulse Waveforms

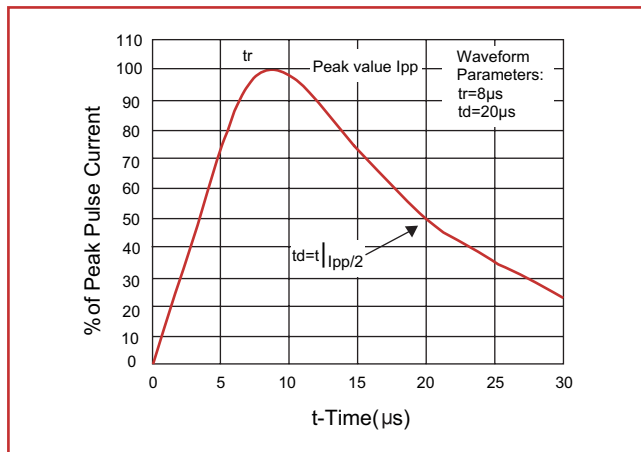
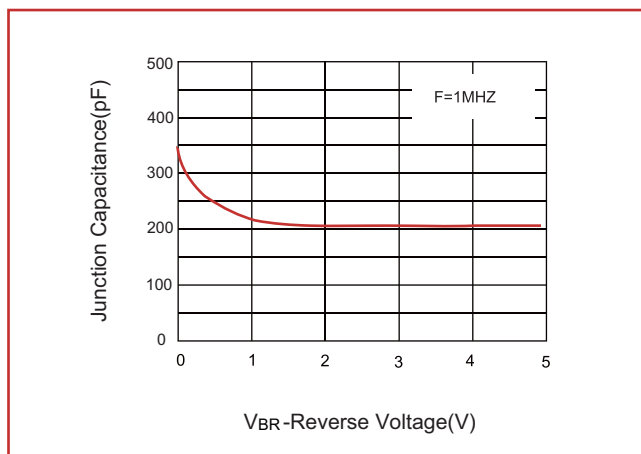
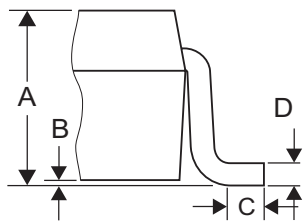
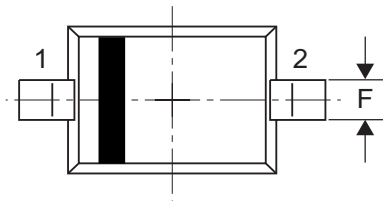
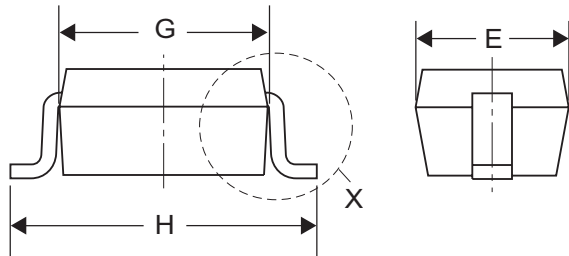


Figure 3. Capacitance vs. Reverse Voltage



PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOD-323 (unit:mm)



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.031	0.043	0.80	1.10
B	-	0.004	-	0.10
C	0.008	-	0.20	-
D	0.004	0.008	0.11	0.20
E	0.045	0.053	1.15	1.35
F	-	0.014	-	0.35
G	0.063	0.071	1.60	1.80
H	0.094	0.102	2.40	2.60

