

DESCRIPTION

Brightking's LAT52C05L02 is ultra low capacitance TVS arrays designed to protect high speed data interfaces. It has been specifically designed to protect sensitive components which is connected to high-speed data and transmission lines from overvoltage caused by electrostatic (ESD), cable discharge events(CDE) and electrical fast transients(EFT).



HBM : ±8kV
Air Mode : ±15kV

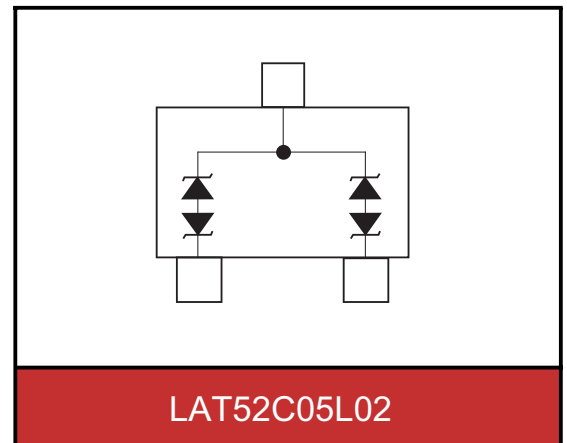
SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- Small SOT-523 surface mount package
- Protects two high speed data lines
- Low capacitance and clamping voltages
- Low leakage current
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270°C
- Flammability rating: UL 94V-0



APPLICATIONS

- HDMI interface protection
- Mobile display digital interface
- RF/Antenna circuits
- USB 2.0 & Firewire ports
- GaAs photodetector protection
- HBT power Amp protection
- Infiniband transceiver protection



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
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)

LAT52C05L02 (Marking: 5E)

Rating	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 each I/O pin			1	μA
Clamping voltage (tp=8/20μs)	V _C	I _{pp} =3A			16	V
Off state junction capacitance	C _J	0Vdc, f=1MHz Between I/O pins and GND		10		pF

TYPICAL CHARACTERISTICS CURVES

Figure 1. Power Derating Curve

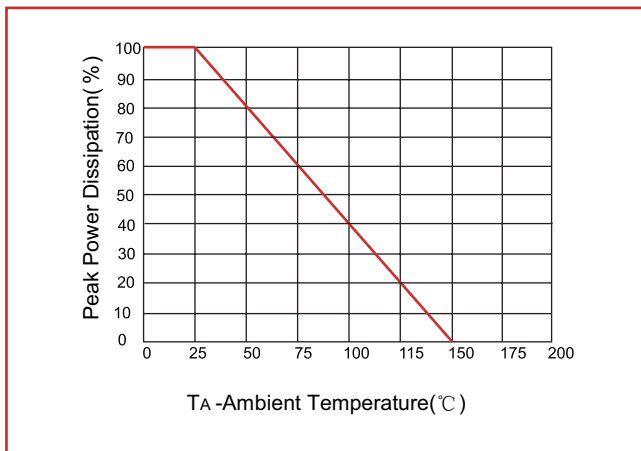


Figure 2. Pulse Waveforms

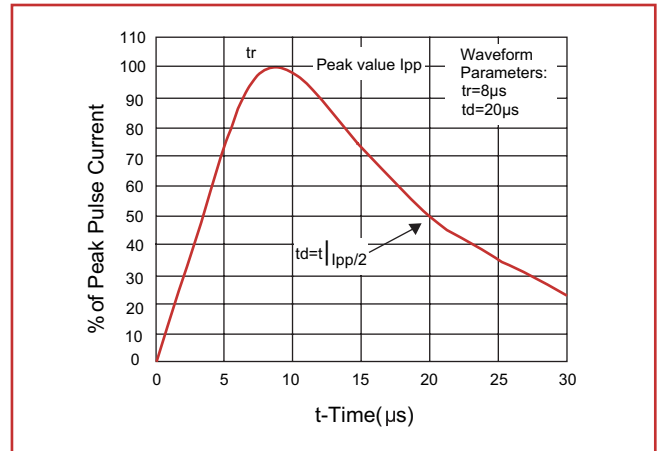


Figure 3. Capacitance vs. Reverse Voltage

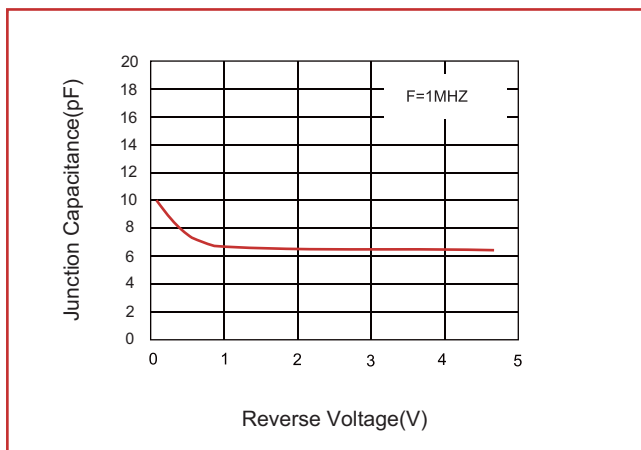
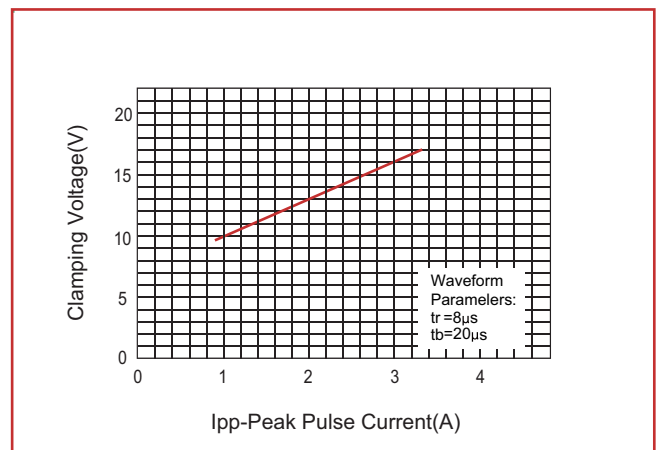
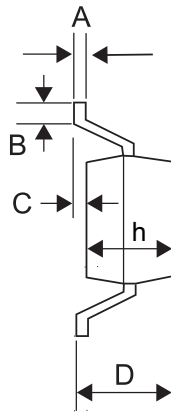
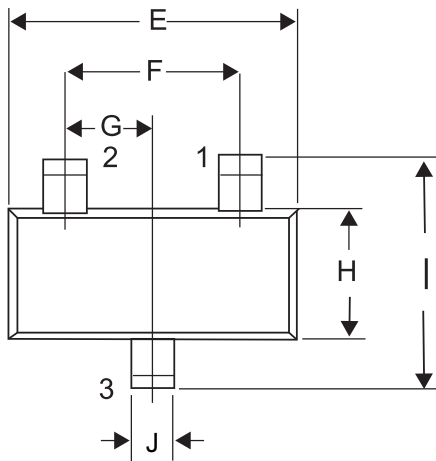


Figure 4. Clamping Voltage vs. Peak Pulse Current



PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOT-523 (unit:mm)



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.008	0.10	0.20
B	0.011	0.017	0.28	0.44
C	-	0.004	-	0.10
D	0.028	0.035	0.70	0.90
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020TYP		0.50TYP	
H	0.030	0.033	0.75	0.85
I	0.057	0.069	1.45	1.75
J	0.006	0.014	0.15	0.35
h	0.028	0.031	0.70	0.80

