

DESCRIPTION

Brightking's SES08C15L04 has been designed to provide bi-directional protection for sensitive electronics from damage or latch-up due to ESD, lightning and other voltage-induced transient events. Each device will protect four data or I/O lines. They are available with operating voltages of 5V and 15V. The series use to meet the immunity requirements of IEC61000 - Level 4 (15KV air,8KV contact discharge).

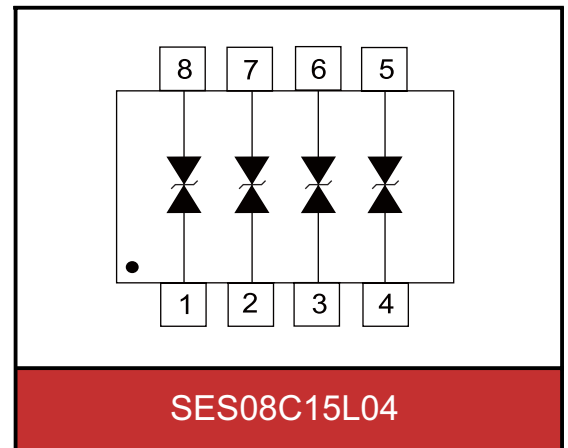


HBM : ±8kV
Air Mode : ±15kV



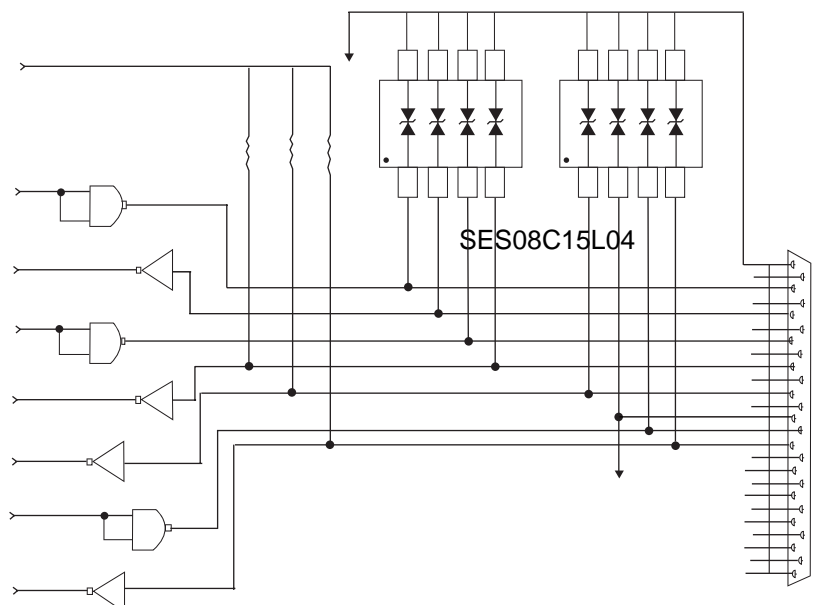
SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- SOIC-08 surface mount package
- Protects four I/O lines
- Peak power dissipation of 500W under 8/20μs waveform
- Working voltage : 15V
- Low leakage current
- Low operating and clamping voltages
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270°C
- Flammability rating UL 94V-0



APPLICATIONS

- RS-232 and RS-422 data line protection
- Microprocessor based equipment
- Audio/Video input protection
- Notebooks, desktops, servers
- Wireless network systems
- Set Top Box (STB)
- Series and parallel ports
- Instrumentation
- Peripherals



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak pulse power (tp=8/20μs waveform)	Ppp	500	W
ESD voltage (HBM contact)	VESD	±8	KV
ESD voltage (AIR contact)		±15	
Storage & operating temperature range	TSTG ,TJ	-55~+150	°C

ELECTRICAL CHARACTERISTICS (TJ=25°C)

SES08C15L04 (Marking : B SM15C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	VRWM				15	V
Reverse breakdown voltage	VBR	IBR=1mA	16.7			V
Reverse leakage current	IR	VR=15V each I/O pin			1	μA
Clamping voltage (tp=8/20μs)	VC	IPP=1A			24	V
Clamping voltage (tp=8/20μs)	VC	IPP=10A			30	V
Off state junction capacitance	CJ	0Vdc,f=1MHZ between I/O pins and GND		80		pF

TYPICAL CHARACTERISTICS CURVES

Figure 1. Power Derating Curve

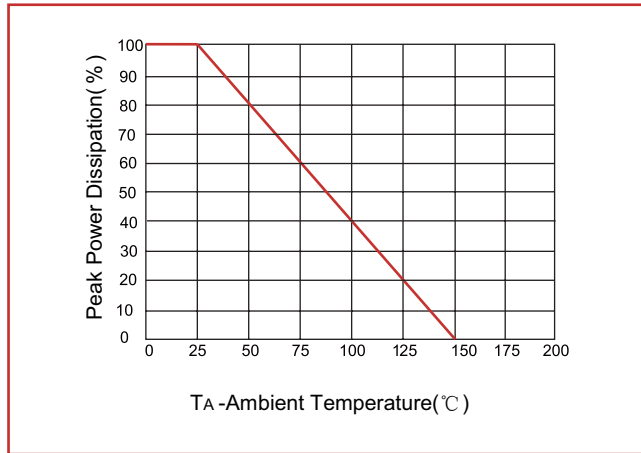


Figure 2. Pulse Waveforms

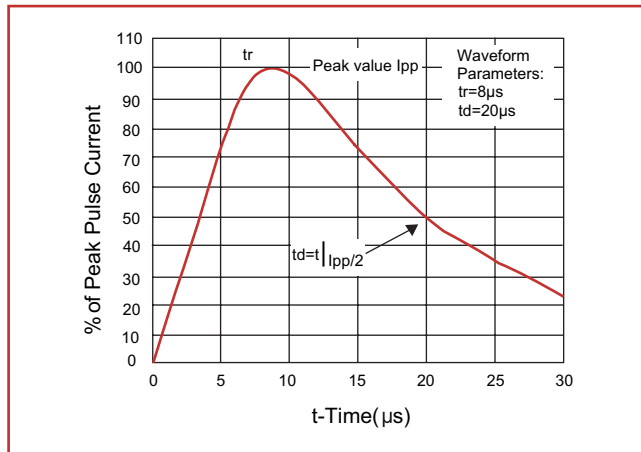
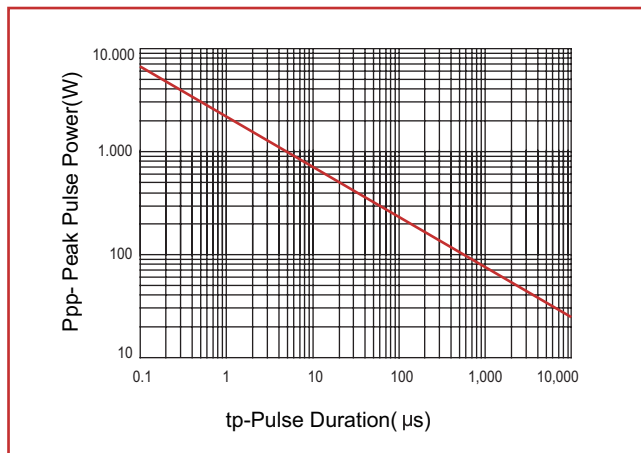
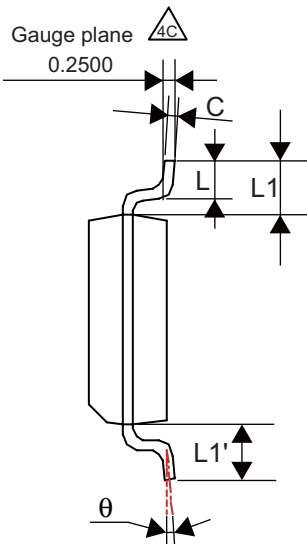
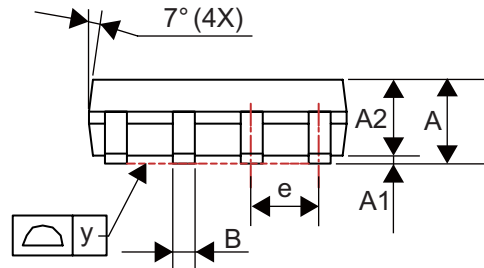
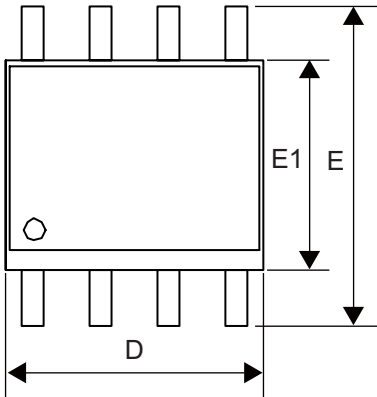


Figure 3. Non-Repetitive Peak Pulse vs Pulse Time



PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOIC-08(unit:mm)



DIMENSIONS						
SYMBOL	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.053	0.063	0.069	1.35	1.60	1.75
A1	0.004	-	0.010	0.10	-	0.25
A2	-	0.057	-	-	1.45	-
B	0.013	-	0.020	0.33	-	0.51
C	0.007	-	0.010	0.19	-	0.25
D	0.189	-	0.197	4.80	-	5.00
E1	0.150	0.153	0.157	3.80	3.90	4.00
e	-	0.050	-	-	1.27	-
E	0.228	0.236	0.244	5.80	6.00	6.20
L	0.016	-	0.050	0.40	-	1.27
y	-	-	0.004	-	-	0.10
θ	0°	-	8°	0°	-	8°
L1-L1'	-	-	0.005	-	-	0.12
L1	0.041REF			1.04REF		

