DESCRIPTION

Brightking's UES08A05L04 has been specifically designed to protect sensitive components which is connected to data and transmission lines from overvoltage caused by electrostatic discharge (ESD) , electrical fast transients (EFT) , and lightning.

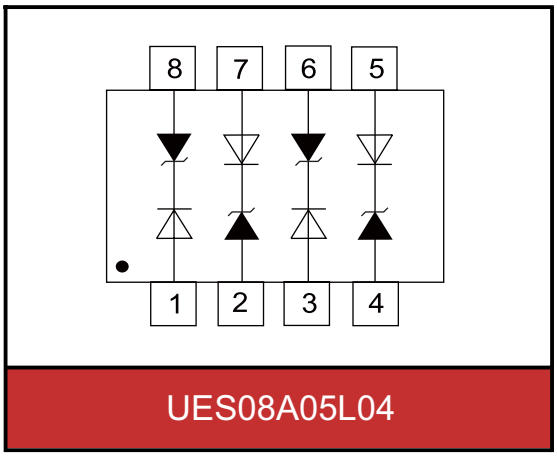
The low capacitance array configuration allows the user to protect four high-speed data or I/O lines.The high surge capability (500W,tp=8/20us) makes the series suitable for telecommunication systems operating in harsh transient environments.

The low inductance construction minimizes voltage overshoot during high current surges.

HBM : ±8kV
Air Mode : ±15kV

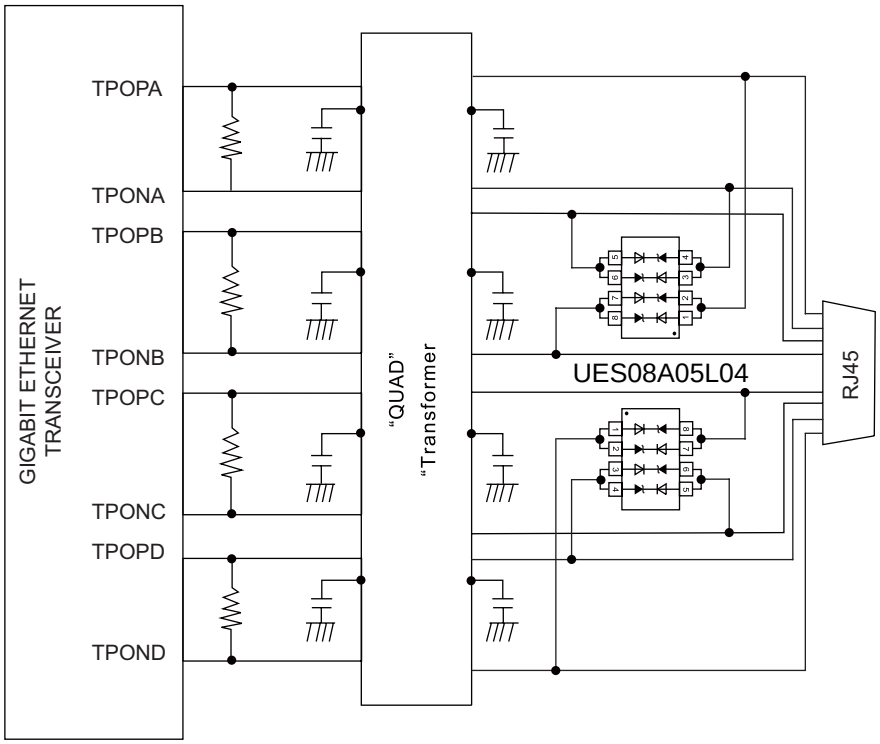
SPECIFICATION FEATURES

- 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:5V
- Low leakage current
- Low capacitance and clamping voltages
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270℃
- Flammability rating UL 94V-0



APPLICATIONS

- Multi-Mode transceiver protection
- Ethernet-10/100 Base T
- Audio/Video inputs
- XDSL interfaces
- RS-422 (V.11,X.21)
- RS-232 (V.28)
- RS-499 (V.11/V.10)



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak pulse power (tp=8/20μs waveform)	Ppp	500	W
ESD voltage (HBM contact)	V_{ESD}	±8	KV
ESD voltage (AIR contact)		±15	
Storage & operating temperature range	T_{STG} ,T_J	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_J=25℃)

UES08A05L04 (Marking:B LCDA05)

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 each I/O pin			5	μA
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=1A			9.8	V
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=20A			13.5	V
Off state junction capacitance	C_J	0Vdc,f=1MHZ between I/O pins and GND			5	pF

TYPICAL CHARACTERISTICS CURVES

Figure 1. Power Derating Curve

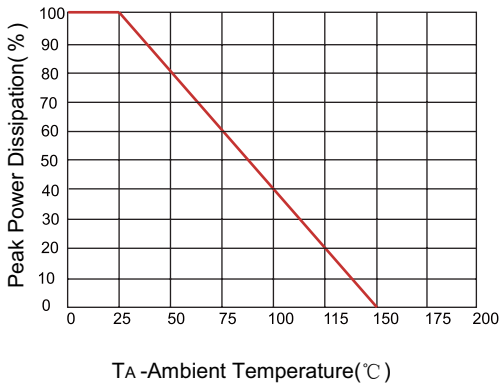


Figure 2. Pulse Waveforms

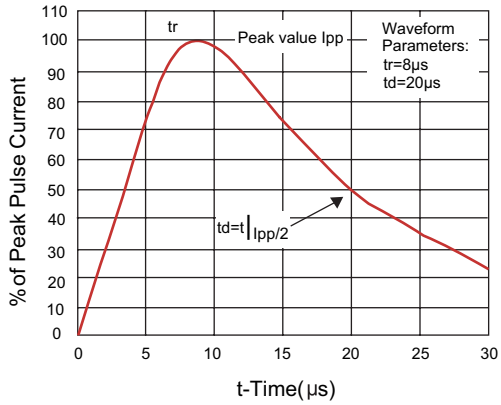


Figure 3. Non-Repetitive Peak Pulse vs Pulse Time

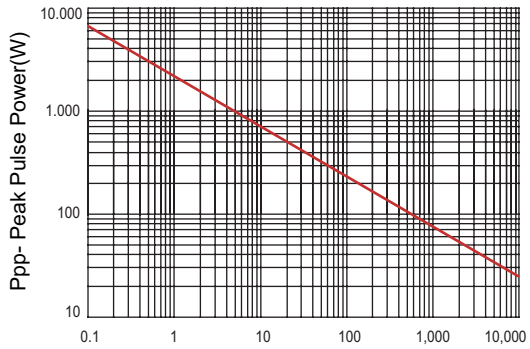


Figure 4. Capacitance vs. Reverse Voltage

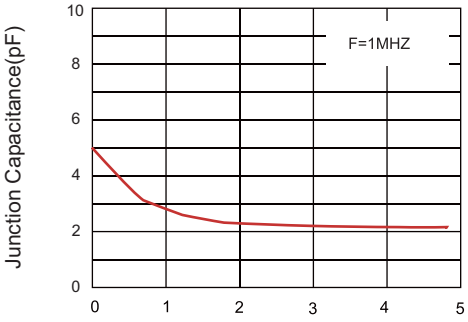
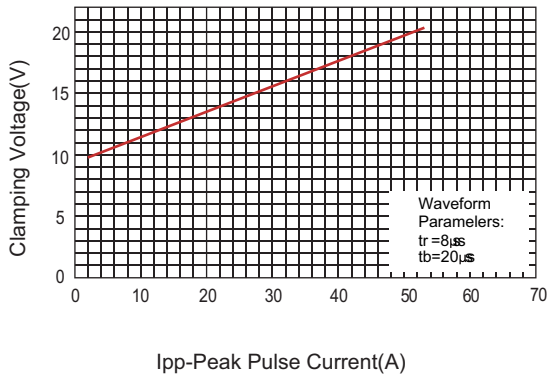
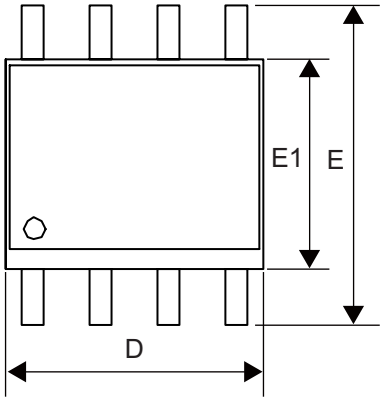


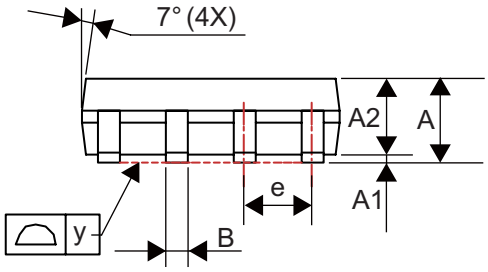
Figure 5. Clamping Voltage vs. Peak Pulse Current

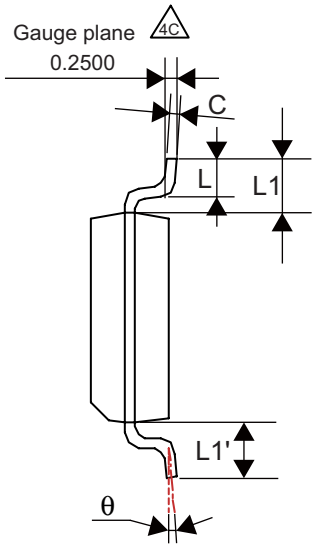


PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

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