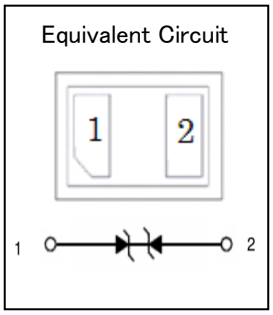
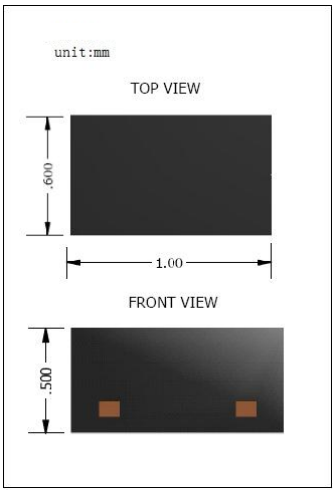
- ◇ Bi-Directional Transient Voltage Suppressor
- ◇ Low Capacitance and Low Leakage
- ◇ Response Time is Typically < 1 ns
- ◇ IEC61000-4-2 Level 4 ESD Protection
- ◇ ROHS Compliant
- ◇ UL-94 V-0 / Green EMC
- ◇ Matte Tin Lead finish (Pb-Free)

Device Marking Code	
ESD8D5.0CAT5G	AK





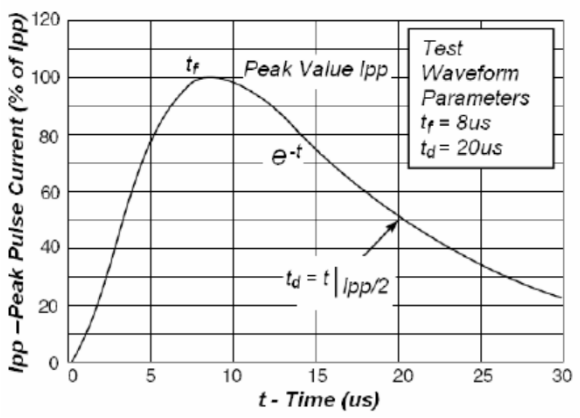
MAXIMUM RATINGS (Ta = 25 ℃)

Symbol	Parameter	Value	Units
$V_{ESD-Air}$	ESD Voltage IEC61000-4-2 Air	±25	kV
$V_{ESD-Contact}$	ESD Voltage IEC61000-4-2 Contact	±20	kV
PD	Total Power Dissipation on FR-5 Board	200	mW
T_J	Junction Temperature	-55 to 150	℃
T_{STG}	Storage Temperature	-55 to 150	℃
TL	Lead Solder Temperature – Maximum (10 Second Duration)	260	℃

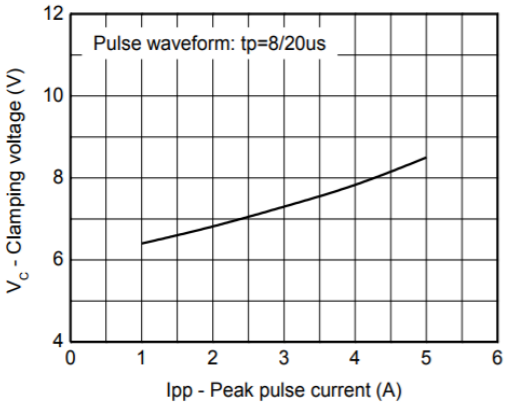
ELECTRICAL CHARACTERISTICS (Ta = 25 ℃ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	5.6		8.0	V
I_{R1}	Reverse Current	V_{RWM} = 5V			0.5	μA
I_{R2}	Reverse Current	V_R = 3.5V			0.3	μA
Vc	Clamping Voltage	Ipp = 1A			9.8	V
Vc	Clamping Voltage	Ipp = 5.5A			12.5	V
C	Capacitance	V_R = 0V, f = 1MHz			15	pF

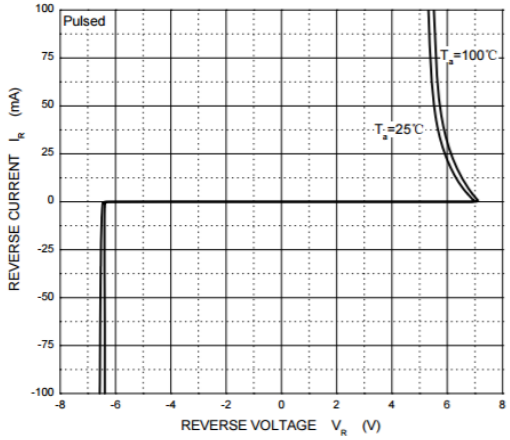
Typical Characteristics



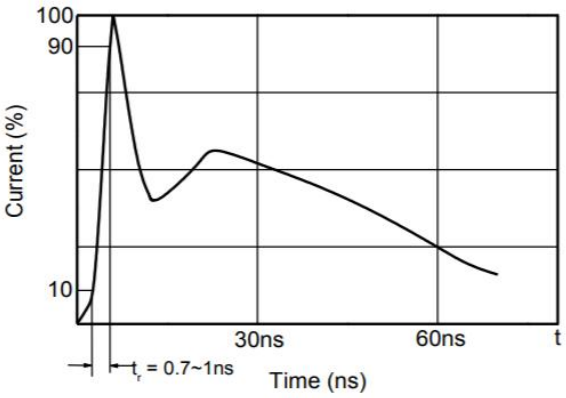
Pulse Waveform



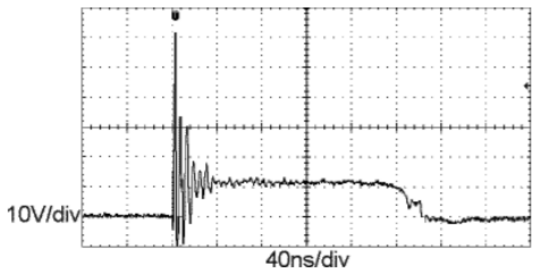
Clamping voltage vs. Peak pulse current



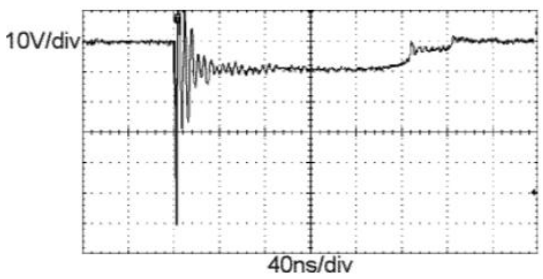
Reverse Characteristics



Contact discharge current waveform per IEC61000-4-2



ESD clamping
(+8kV contact discharge per IEC61000-4-2)



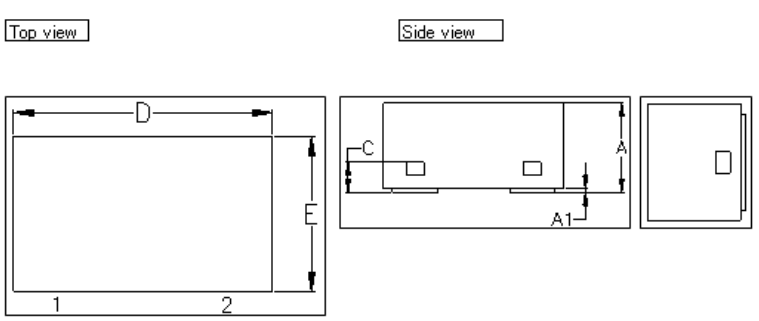
ESD clamping
(-8kV contact discharge per IEC61000-4-2)

ORDERING INFORMATION

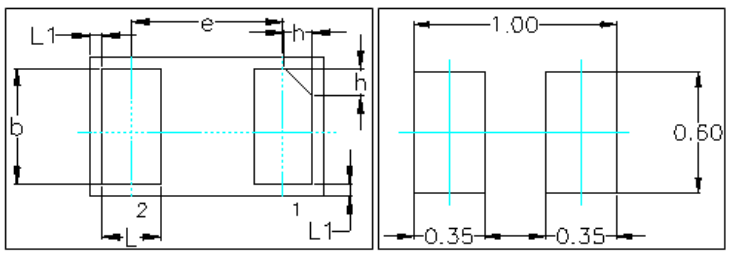
Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
ESD8D5.0CAT5G	SOD-882	Tape & Reel 10000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS

Package outline :



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
b	0.45	0.50	0.55
C	0.12	0.15	0.18
D	0.95	1.00	1.05
e		0.65BSC	
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1		0.05 REF.	
h	0.07	0.12	0.17



Notice:

1 Lead plating: Pb free solder
2 Lead thickness includes solder plating
3 Lead frame: Copper A194
4 Other Tolerance: ± 0.05
5 Dimensions are exclusive of Burrs,Mold Flash and Tie Bar extrusions
6 Unit: mm