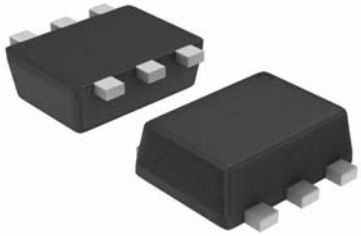
YENYO

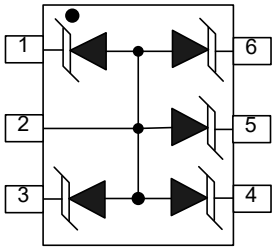
YEDST56057A5V

ESD Protection Diode

Features

- 90Watts peak pulse power (tp = 8/20μs)
- SOT-563 Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Normal capacitance (15pF typical I/O to GND)
- Protection to:
  IEC 61000-4-2 ±8KV contact ±15KV air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 7.5A (8/20μs)





Mechanical Data

- **Case:** SOT-563 (plastic package).
  Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
  UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
  260 °C/10 sec. at terminals

Applications

- Computers and peripherals
- Communication systems
- Notebook
- Cellular handsets and accessories
- Portable electronics
- Audio and video equipment

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power (T_P=8/20μS)	P_{PP}	90	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	8/15	kV
Peak Pulse Current (t_P = 8/20μS)	I_{PP}	7.5	A
Junction Temperature	T_J	-55 to +125	℃
Storage temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6			V
Reverse Leakage Current	I_R	V_R=5V		0.01	0.5	μA
Clamping Voltage(SURGE)	V_C	I_{PP}=7.5A, T_P=8/20μs		12		V
Trigger Voltage(ESD)	V_T	V_{ESD} = +8kV		100		V
Clamping Voltage(ESD)	V_C	V_{ESD} = +8kV		20		V
Junction Capacitance	C_J	V_R=0V,f=1MHz (1)		15		pF

Note1: Pin 1, 3, 4, 5, 6 to Pin 2

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

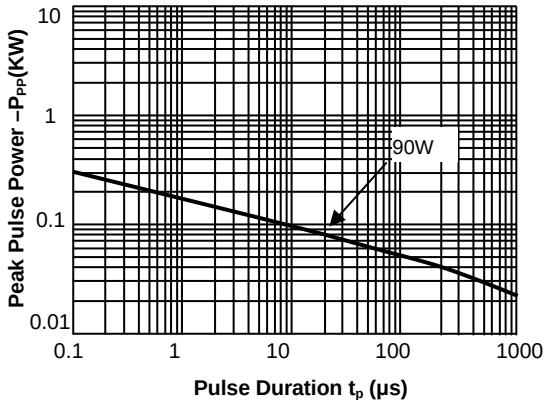


Fig.2 Pulse Derating Curve

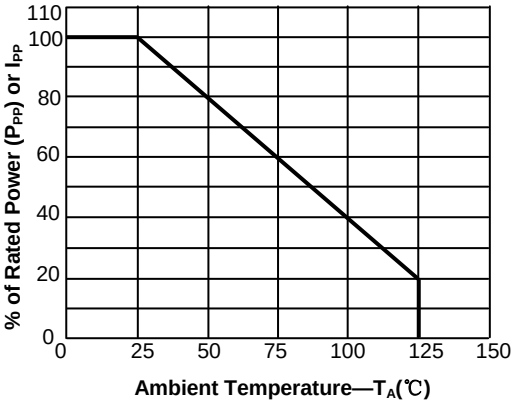


Fig.3 Pulse Waveform-8/20μs

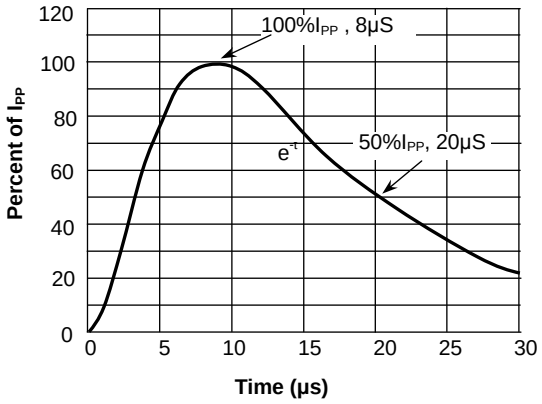
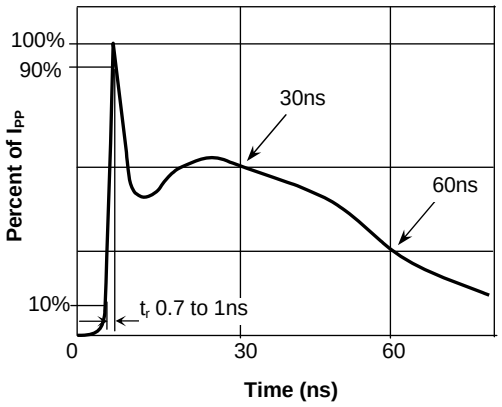
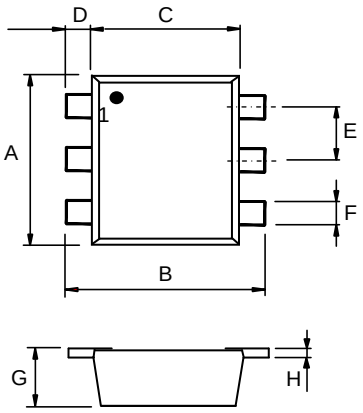


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

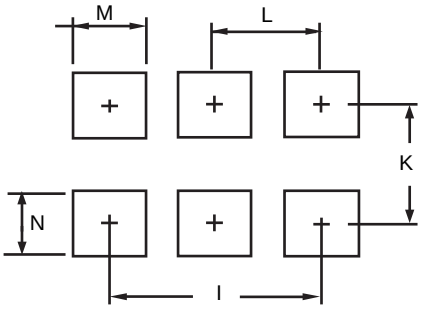


Package Dimensions



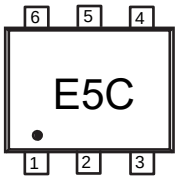
Dim	millmeters	
	min	max
A	1.50	1.70
B	1.50	1.70
C	1.10	1.30
D	0.10	0.30
E	0.50BSC	
F	0.17	0.27
G	0.50	0.60
H	0.08	0.16

Pad Dimensions



Dim	millmeters
I	1.02
K	1.40
L	0.51
M	0.51
N	0.30

Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
YEDST56057A5V	SOT-563	Tape and reel	3000pcs / reel	EIA STD RS-481