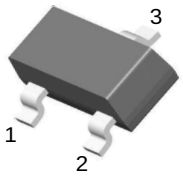
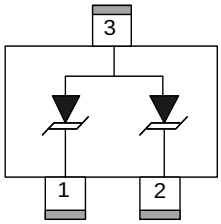
YEDST232040AV

ESD Protection Diode

Features

- 1000Watts peak pulse power (tp = 8/20μs)
- SOT-23 package
- Uni-directional configurations
- Low clamping voltage
- Low leakage current
- Normal capacitance (Cj=60pF typ.)
- Protection one data/power line to:
  IEC 61000-4-2 ±30kV contact ±30kV air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 40A (8/20μs)





Mechanical Data

- **Case:** SOT-23 (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

- Microprocessor based equipment
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- Portable Instrumentation

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}	1000	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current (T_P = 8/20μs)	I_{PP}	40	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}				20	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	22	23.5	24	V
Reverse Leakage Current	I_R	V_{RWM}=20V			1	uA
Clamping Voltage (IEC 61000-4-5)	V_C	I_{PP}=40A		20		V
Junction Capacitance	C_J	V_R=0V, f=1MHz		60		pF

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

Fig.1 Peak Pulse Power Rating Curve

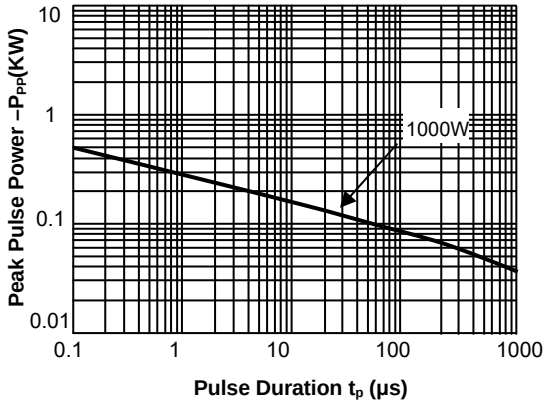


Fig.2 Pulse Derating Curve

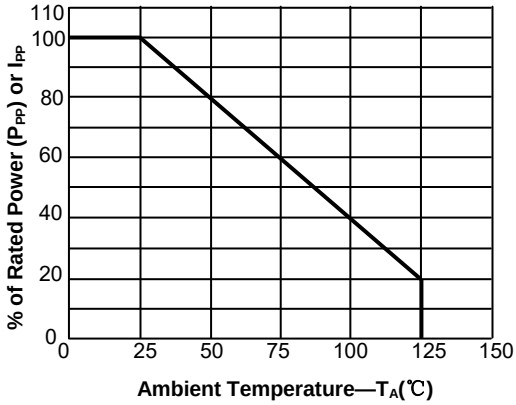


Fig.3 Pulse Waveform-8/20μs

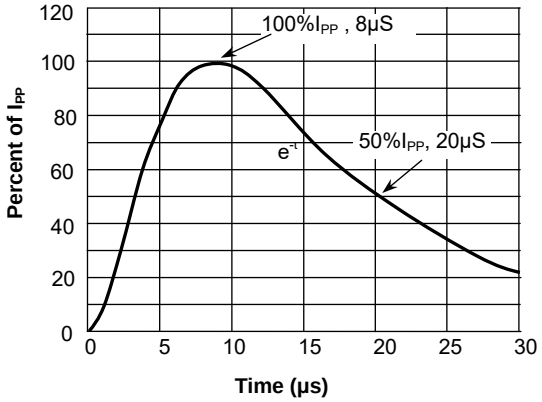
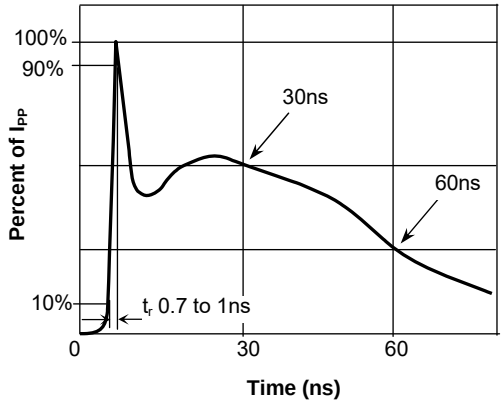
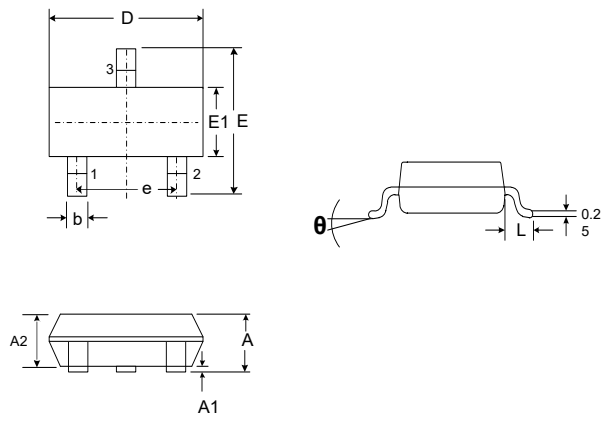


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

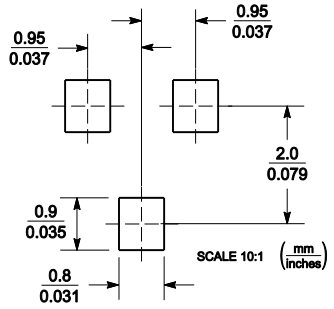


Package Dimensions

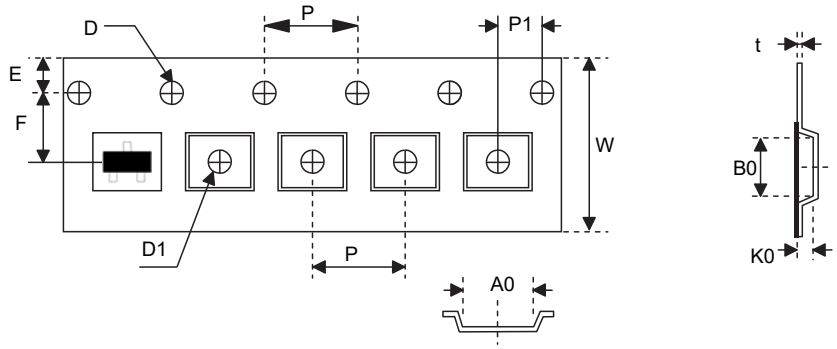


SYMBOL	DIMENSIONS			
	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.89	1.12	0.035	0.044
A1	0.01	0.10	0.0006	0.0043
A2	0.88	1.02	0.035	0.040
D	2.80	3.04	0.110	0.120
E	2.10	2.64	0.082	0.104
E1	1.20	1.40	0.047	0.055
e	1.90BSC		0.75 BSC	
L	0.40	0.60	0.015	0.024
θ	0	8	0	8

Pad Dimensions



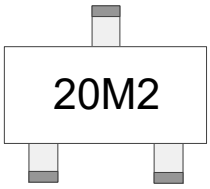
Pakeage Information



Unit:mm

A0	B0	K0	D1	D	E	F	W	P	P1	t
3.15±0.10	2.77± 0.10	1.22±0.10	0.95～1.10	1.50～1.60	1.75±0.10	3.50±0.05	7.90～8.3	4.00± 0.10	2.00± 0.05	0.22± 0.40

Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
YEDST232040AV	SOT-23	Tape and reel	3000pcs / reel	EIA STD RS-481