

FEATURES

- Uni-directional ESD protection of one line
- Reverse stand-off voltage: 3.3V~12V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

MECHANICAL DATA

- Case : Molded plastic, WBFBP-02C
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant
- Moisture Sensitivity Level 1

MECHANICAL DATA

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communi- cation systems

WBFBP-02C

Marking Code : A,B,X7,C

SESD3V3WB



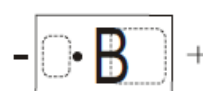
Front side

SESD7V0WB



Front side

SESD5V0WB



Front side

SESD12VWB



Front side

DESCRIPTION

- Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD.
- The combination of small size, high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	V _{ESD} ⁽¹⁾	±25	kV
Air Model			
Contact Model		±25	
JESD22-A114-B ESD Voltage		±16	
ESD Voltage	Machine Model	±0.4	
Lead Solder Temperature – Maximum (10 Second Duration)	T _L	260	°C
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

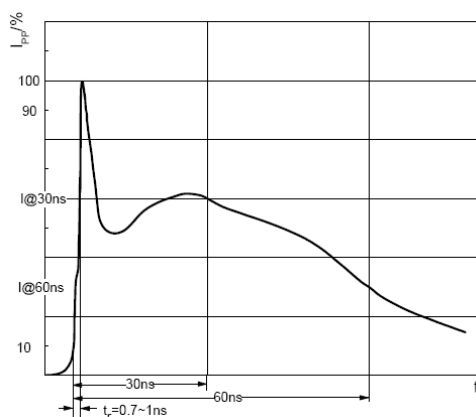
ESD standards compliance

IEC61000-4-2 Standard

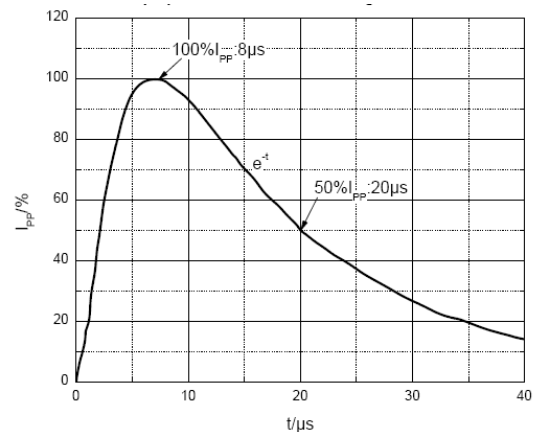
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0~249
1A	250~499
1B	500~999
1C	1000~1999
2	2000~3999
3A	4000~7999
3B	8000~15999



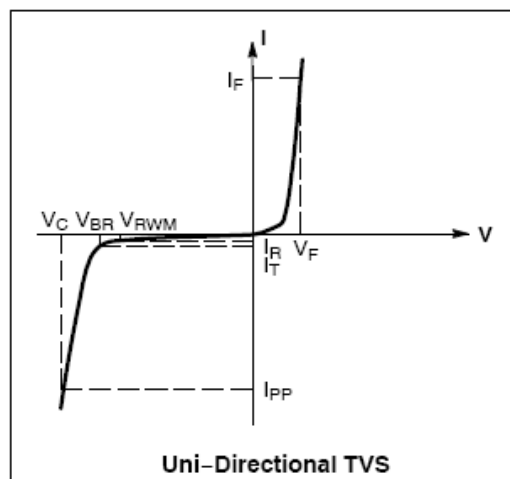
ESD pulse waveform according to IEC61000-4-2



8/20μs pulse waveform according to IEC 61000-4-5

ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted)

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _F	Forward Current
V _F	Forward Voltage @ I _F
P _{pk}	Peak Power Dissipation
C	Max. Capacitance @V _R =0 and f =1MHz



ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10mA for all types)

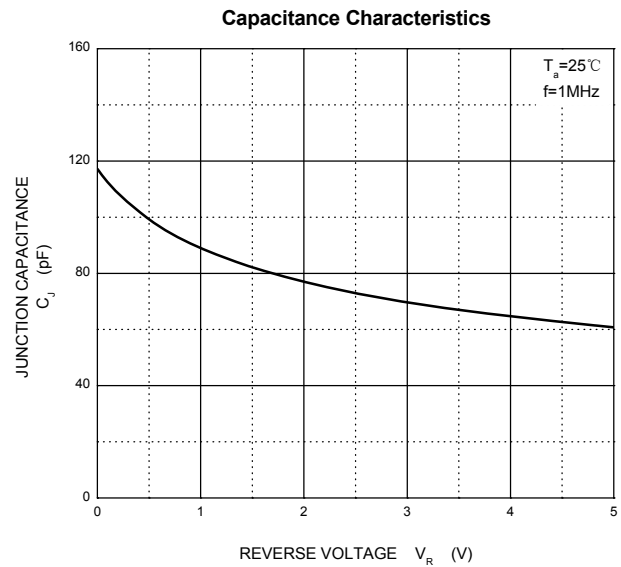
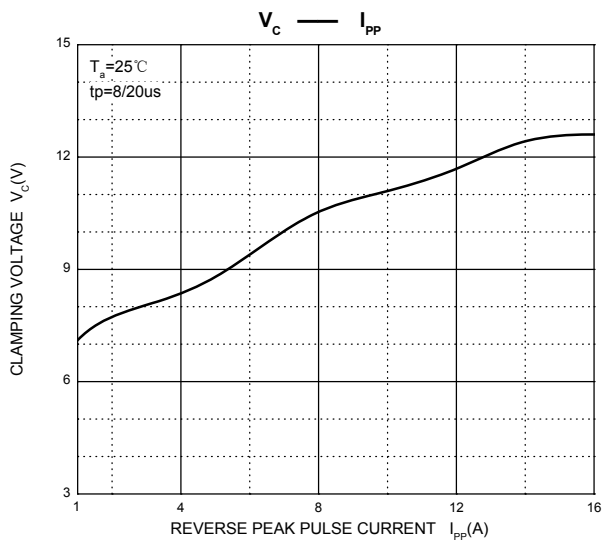
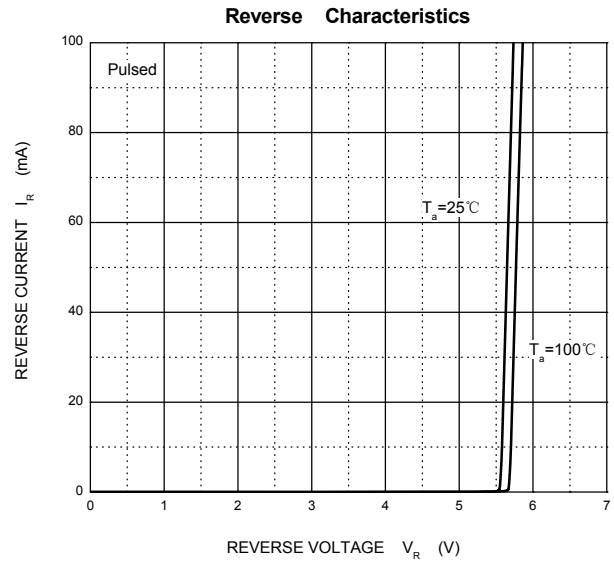
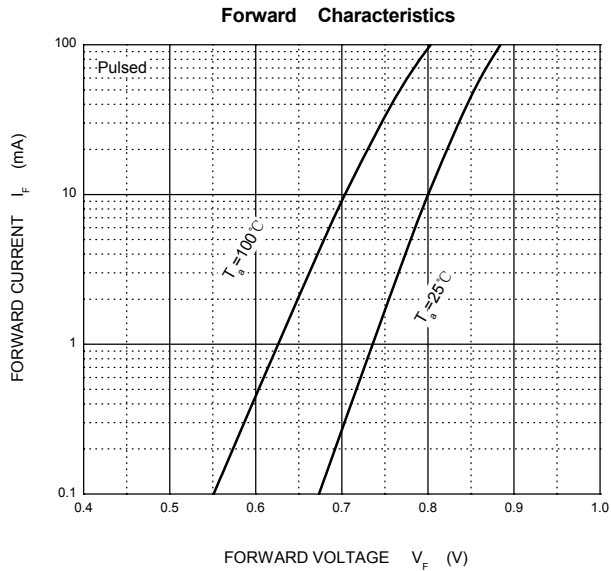
Device*	Device Marking	V _{RWM} (V) (Note 1)	I _R (μA) @ V _{RWM}	V _{BR} (V) @ I _T		I _T	Max I _{PP} (A) (Note 2)	V _C (V) @Max I _{PP} (A) (Note 2)	P _{pp} (W) (8 x 20 μs) (Note 2)	C (pF)
		Max	Max	Min	Max	mA	-	Max	Max	Typ
SESD3V3WB	A	3.3	1.0	5.0	5.9	1.0	16	13	210	120
SESD5V0WB	B	5.0	1.0	6.2	7.3	1.0	13	13	170	95
SESD7V0WB	X7	7.0	1.0	7.5	8.7	1.0	10	15.1	150	70
SESD12VWB	C	12	1.0	13.5	16.5	1.0	9	25	225	48

(1).Device stressed with ten non-repetitive ESD pulses.

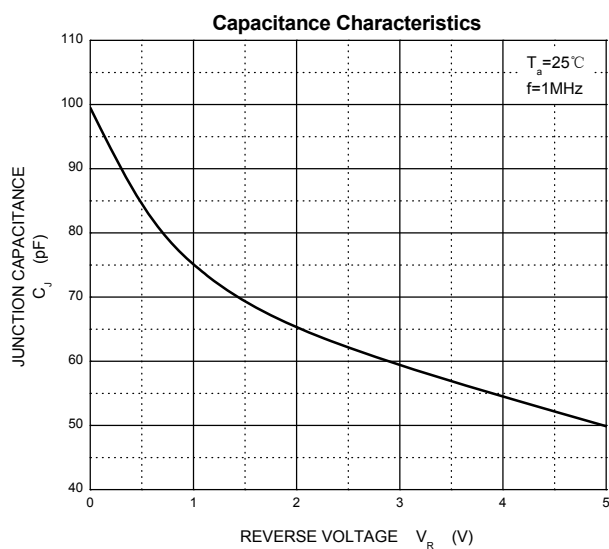
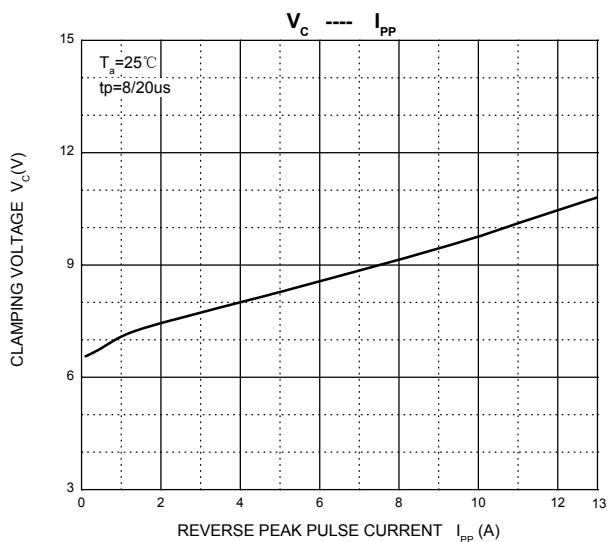
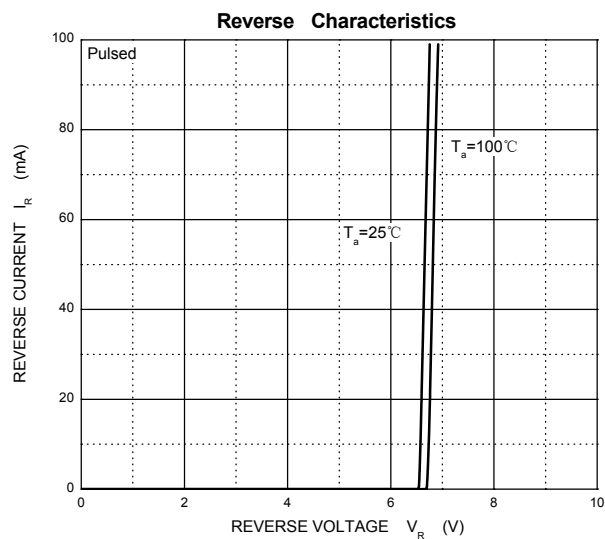
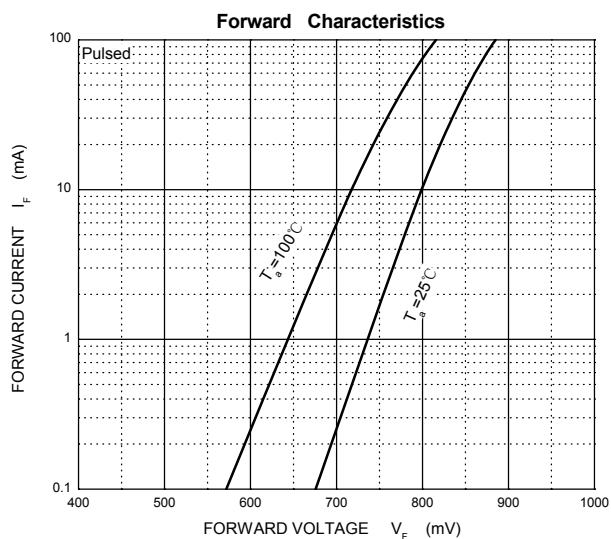
(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.



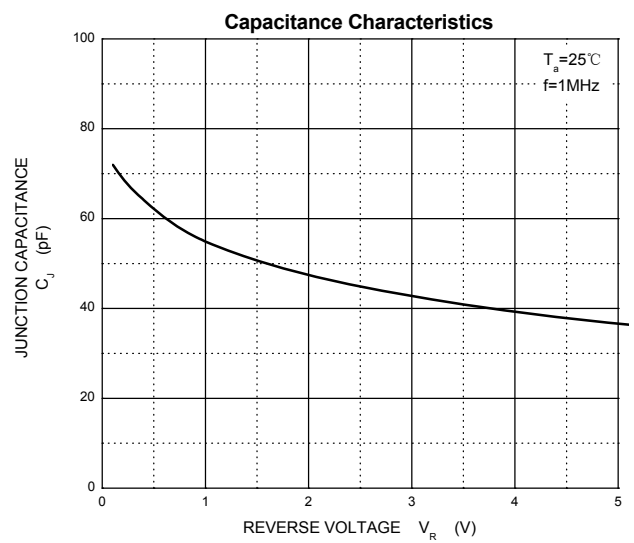
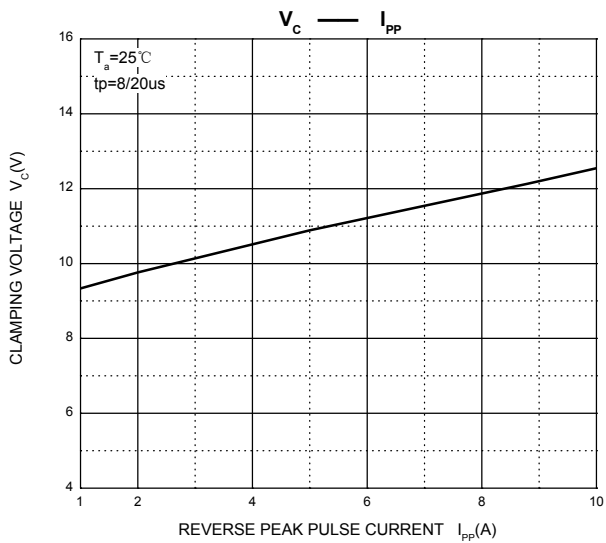
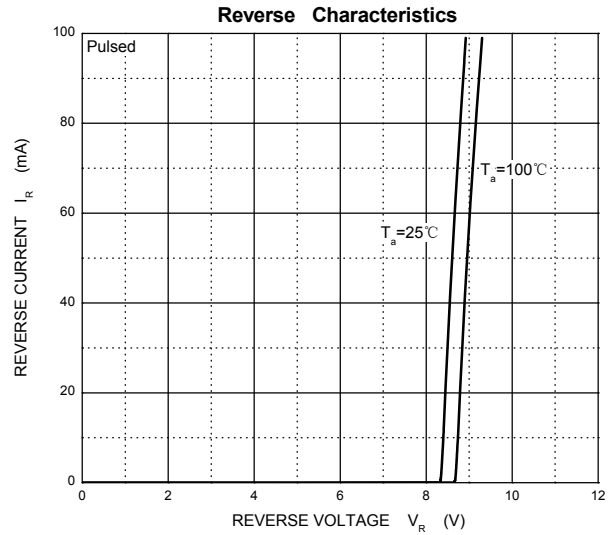
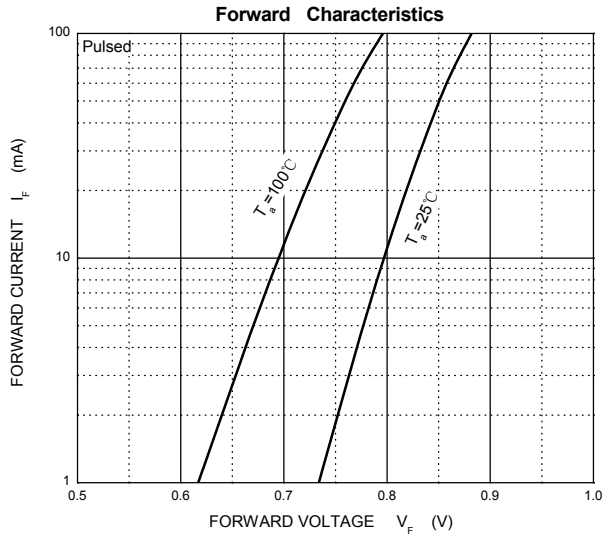
TYPICAL CHARACTERISTICS - SESD3V3WB



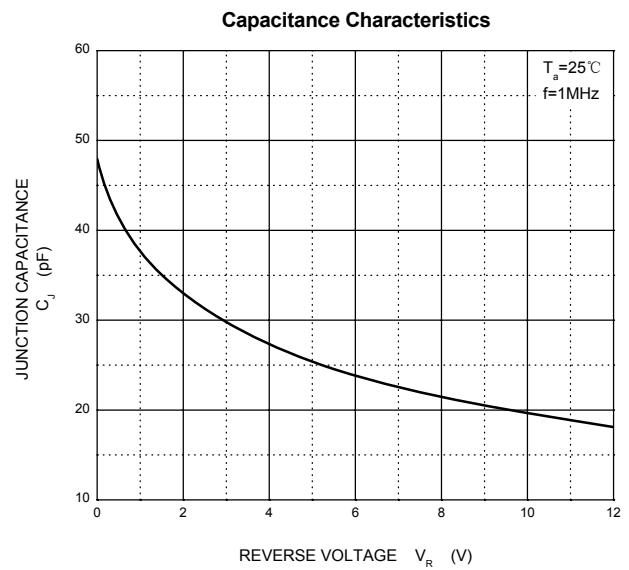
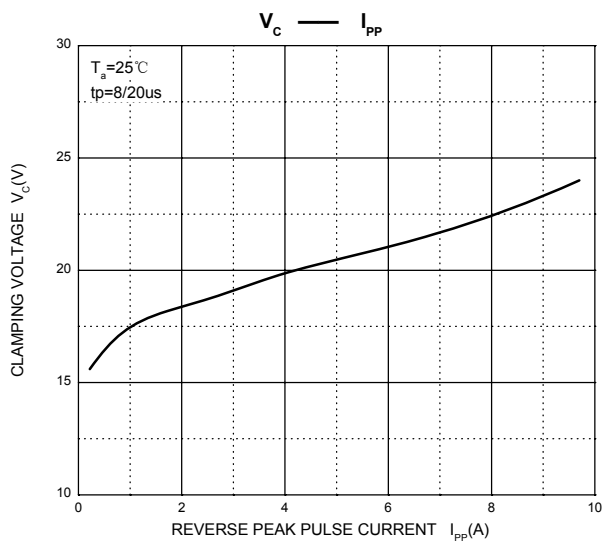
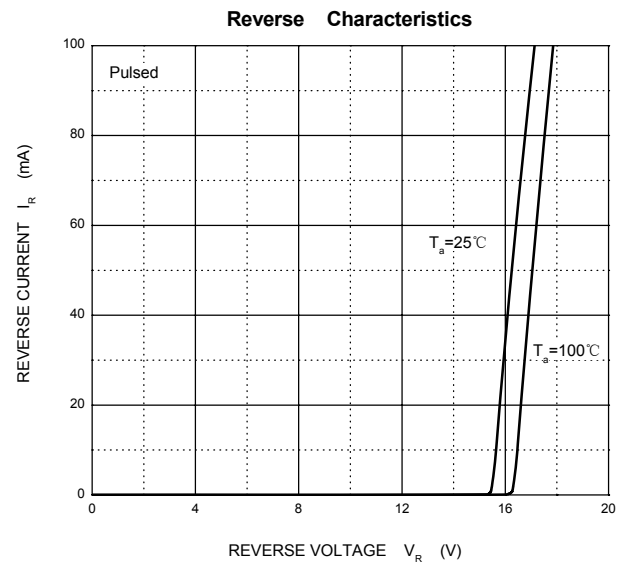
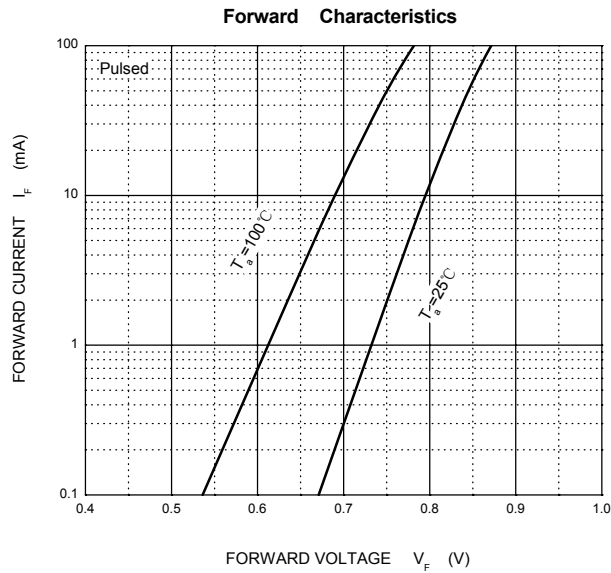
TYPICAL CHARACTERISTICS - SESD5V0WB



TYPICAL CHARACTERISTICS - SESD7V0WB

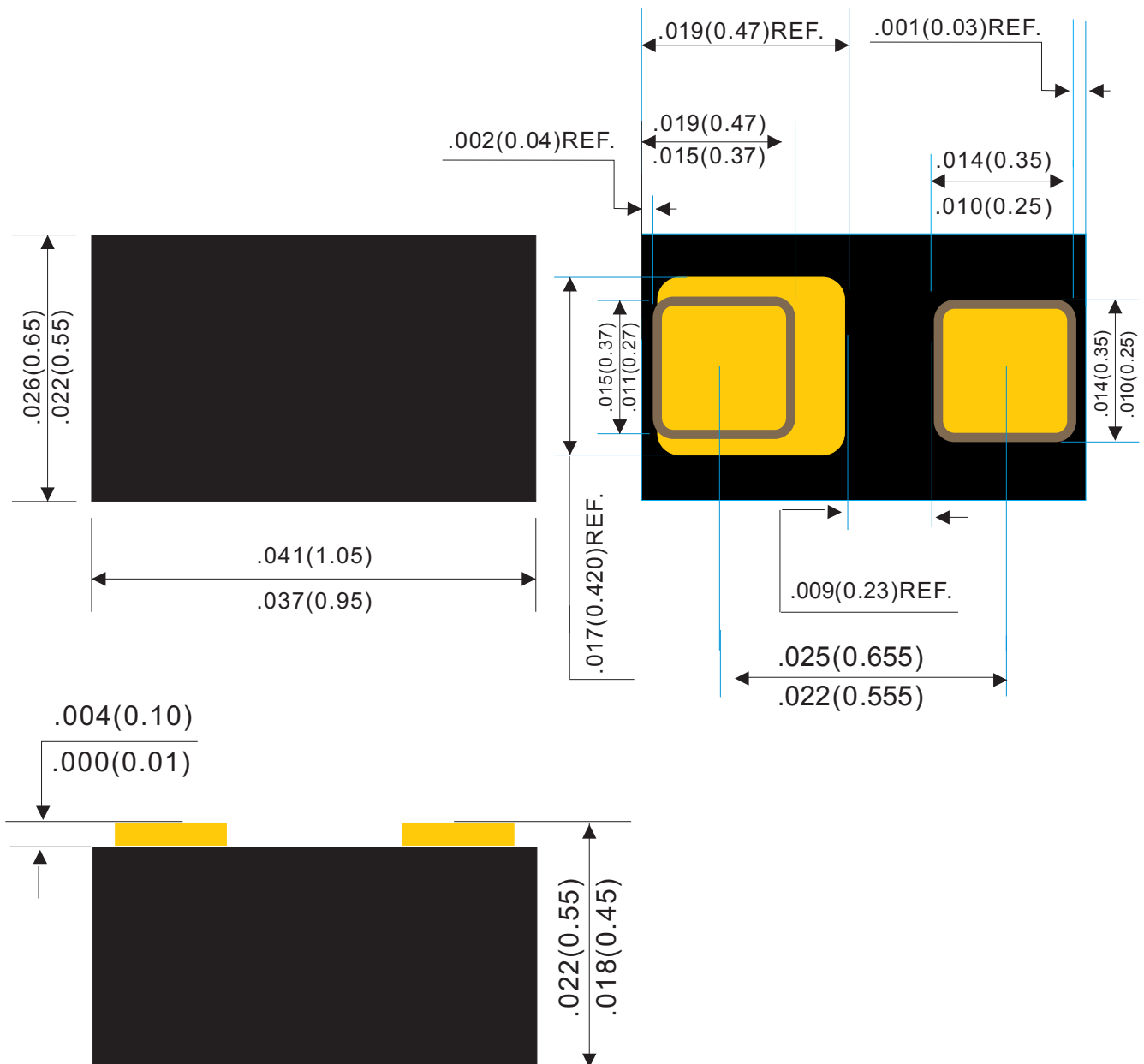


TYPICAL CHARACTERISTICS - SESD12VWB



Outline Drawing

WBFBP-02C



Dimensions in inches and (millimeters)

Rev.D

Ordering Information:

Device PN	Packing
Part Number -T ⁽¹⁾ G ⁽²⁾ -WS	Tape&Reel: 10 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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