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

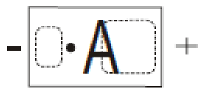
MECHANICAL DATA

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

WBFBP-02C

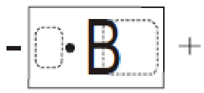
Marking Code : A,B,X7,C

SESD3V3WB



Front side

SESD5V0WB

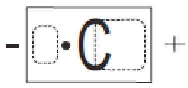


Front side

SESD7V0WB

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℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage — Air Model	V_{ESD} (1)	±25	kV
IEC 61000-4-2 ESD Voltage — Contact Model		±25	
JESD22-A114-B ESD Voltage — Per Human Body Model		±16	
ESD Voltage — Machine Model		±0.4	
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	℃
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ +150	℃

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

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

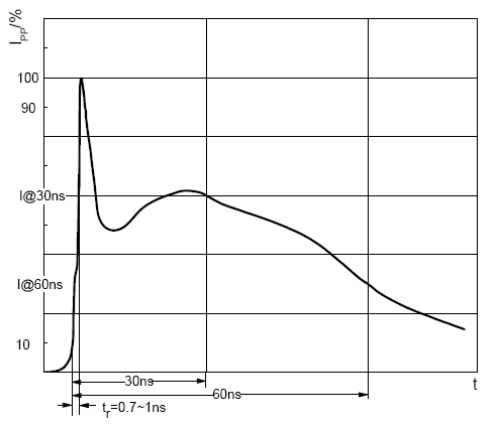
ESD standards compliance

IEC61000-4-2 Standard

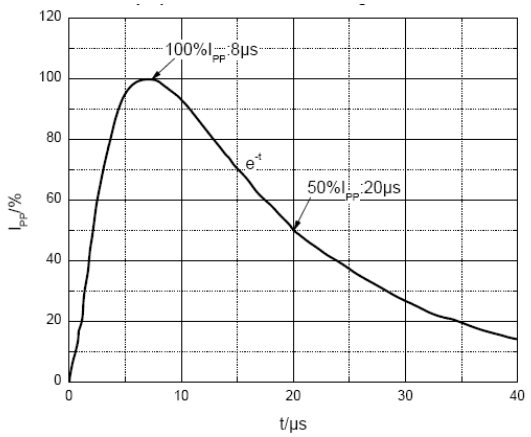
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

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



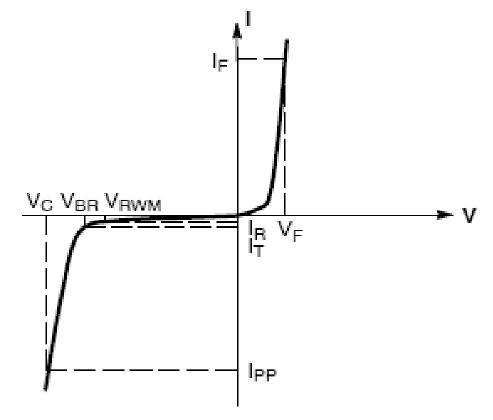
ESD pulse waveform according to IEC61000-4-2



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



Uni−Directional TVS

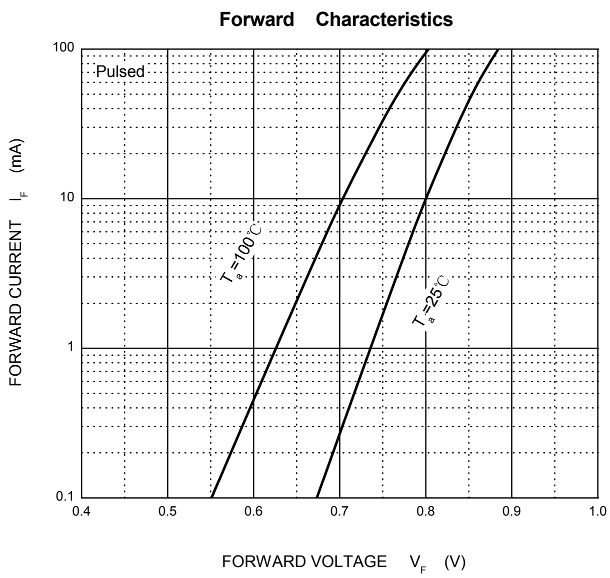
ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted, V_F = 0.9 V Max. @ I_F = 10mA for all types)

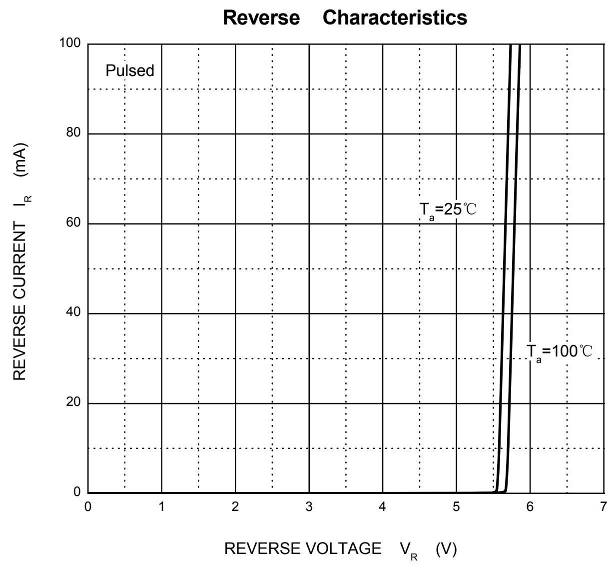
Device*	Device Marking	V_{RWM} (V) (Note 1)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ I_T		I_T	Max I_{PP}(A) (Note 2)	V_C (V) @Max I_{PP} (A) (Note 2)	P_{pp} (W) (8 x 20μs) (Note 2)	C (pF)
		Max	Max	Min	Max	mA	-	Max	Max	Typ
SESD3V3WB	A	3.3	1.0	5.0	5.9	1.0	16	13	210	120
SESD5V0WB	B	5.0	1.0	6.2	7.3	1.0	13	13	170	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

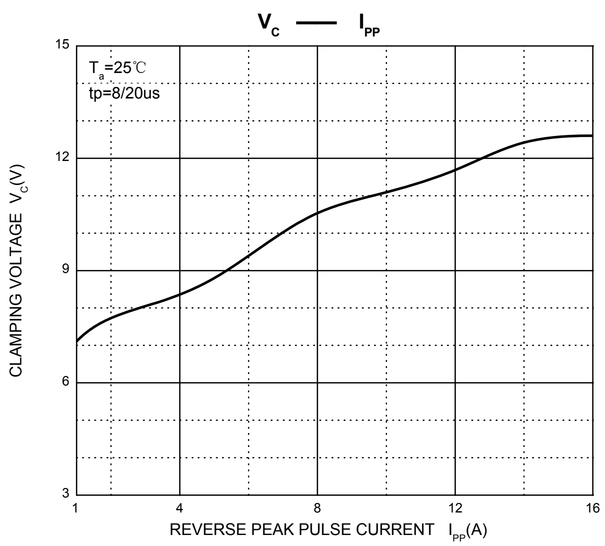
(1).Device stressed with ten non-repetitive ESD pulses.

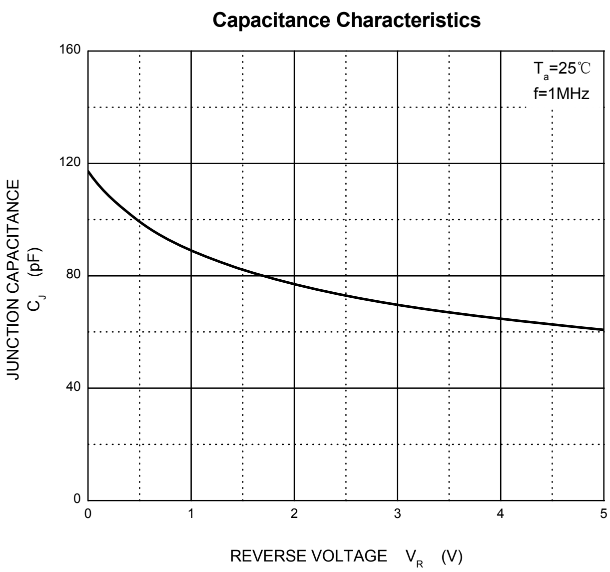
(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

TYPICAL CHARACTERISTICS - SESD3V3WB

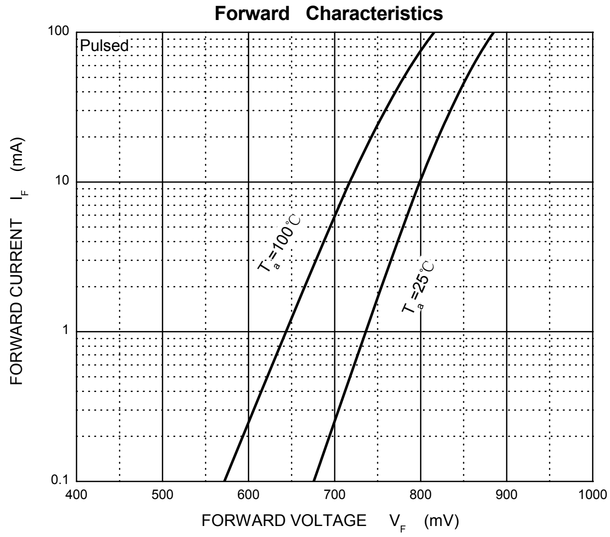


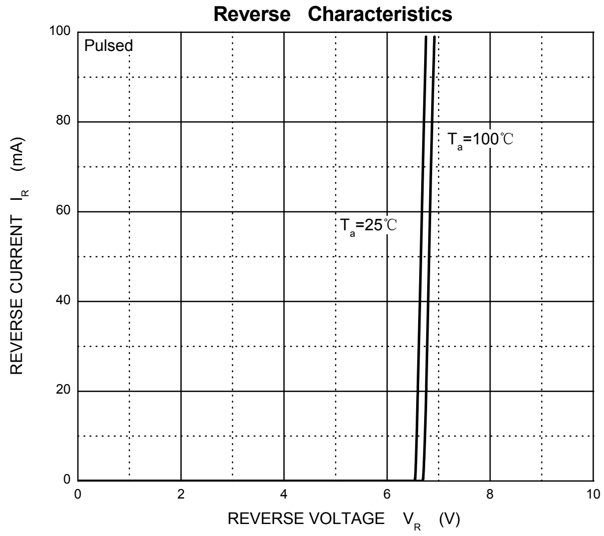


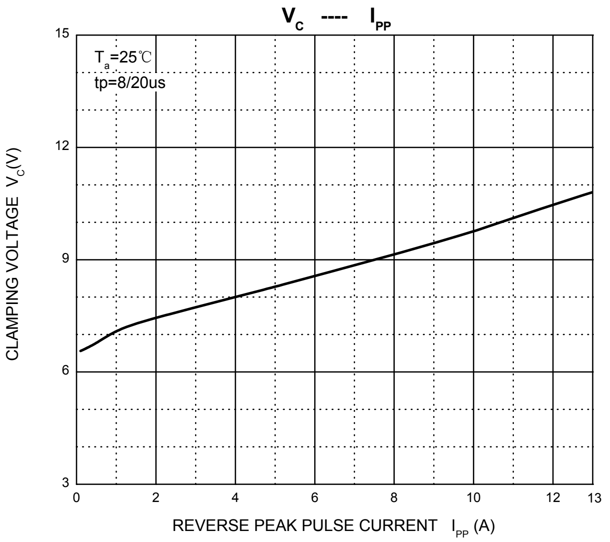


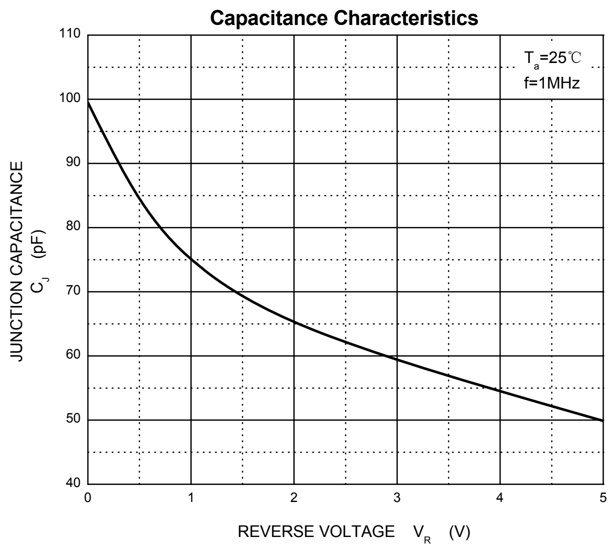


TYPICAL CHARACTERISTICS - SESD5V0WB

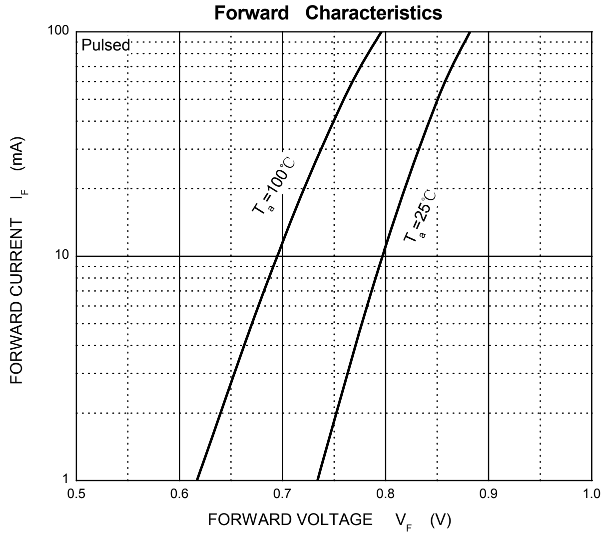


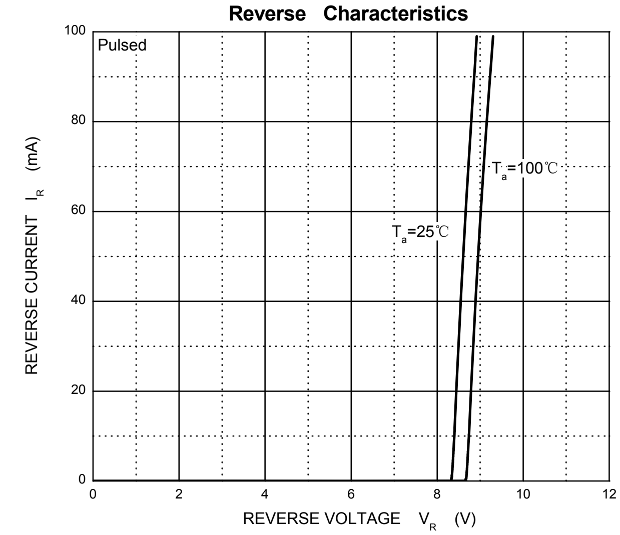


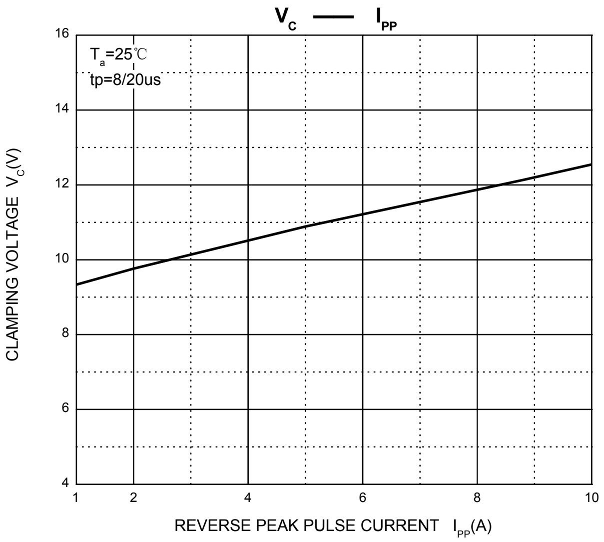


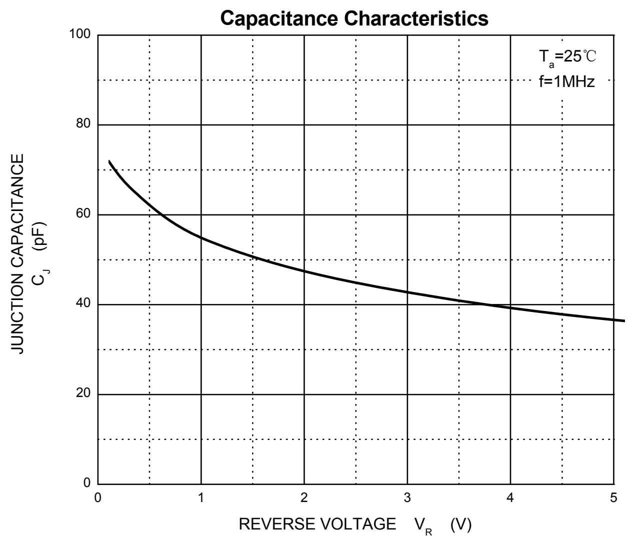


TYPICAL CHARACTERISTICS - SESD7V0WB

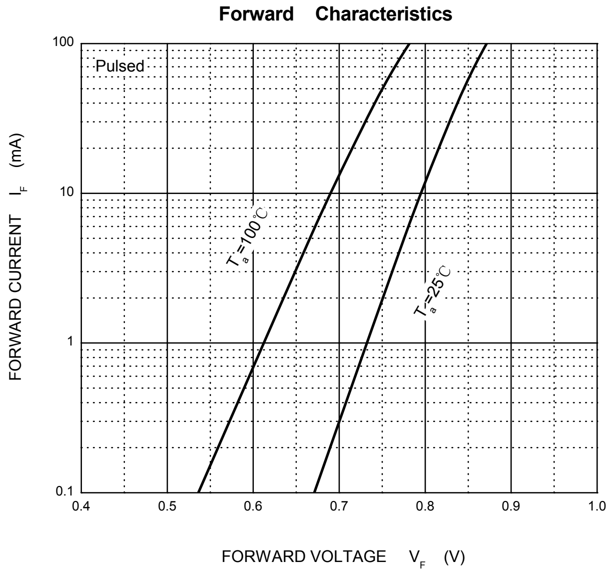


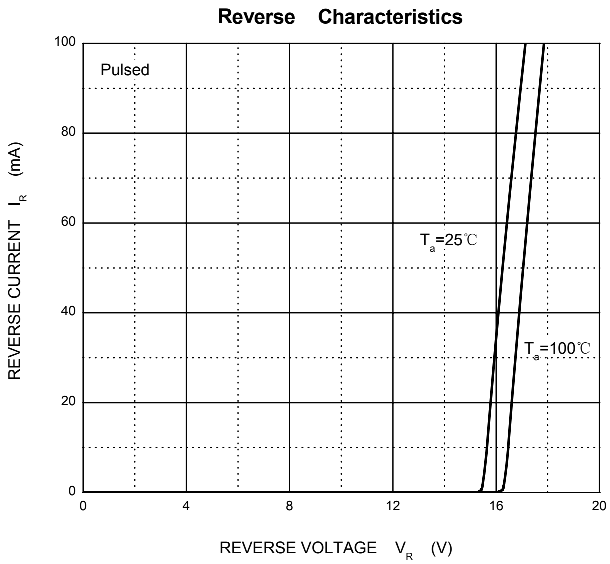


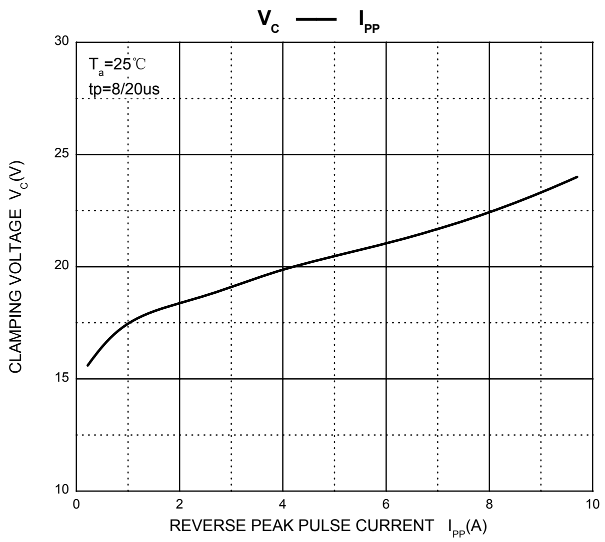


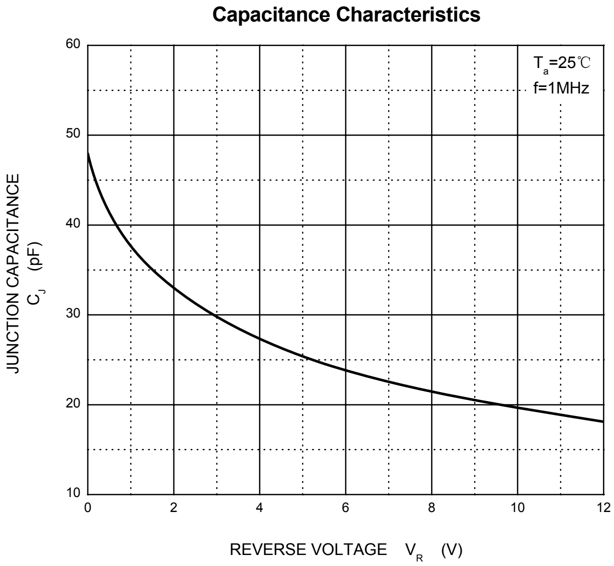


TYPICAL CHARACTERISTICS - SESD12VWB



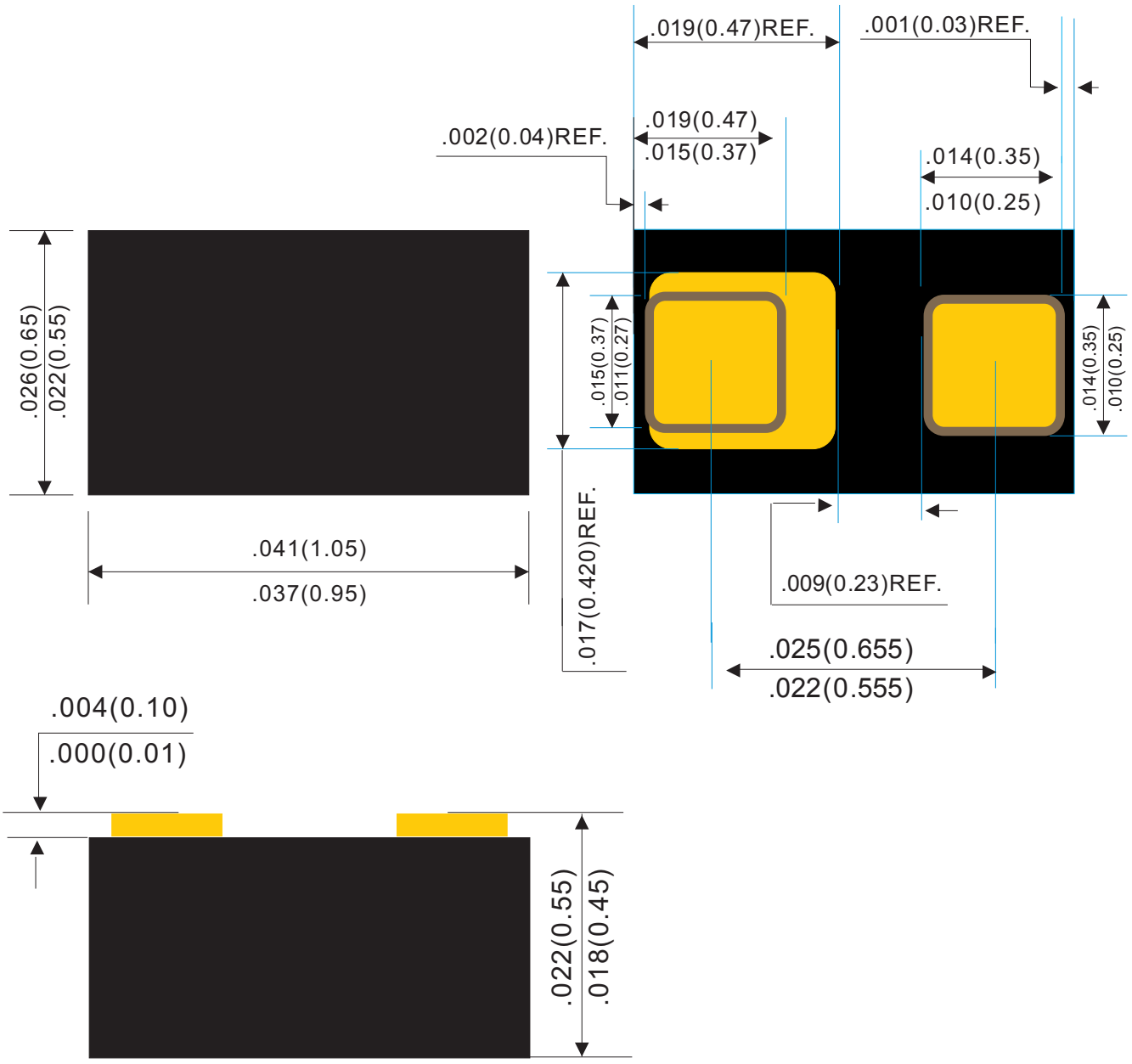






Outline Drawing

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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