



SEMICONDUCTOR

DATA SHEET

YSBLCxxC



LOW CAPACITANCE TVS DIODE ARRAY

APPLICATIONS

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation
- ◆ Peripherals
- ◆ USB Interface

IEC COMPATIBILITY

- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 μs)
- ◆ IEC61000-4-5 (Lightning) 12A (8/20 μs)

FEATURES

- ◆ 350 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ◆ Protects one I/O line (bidirectional)
- ◆ Low clamping voltage
- ◆ Working voltages: 3V, 5V, 8V, 12V, 15V, 24V
- ◆ Low leakage current

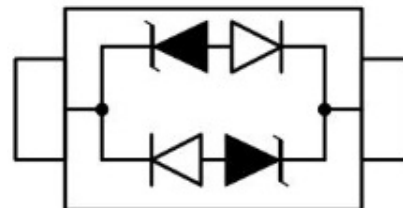
MECHANICAL CHARACTERISTICS

- ◆ JEDEC SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 5 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

SOD-323



PIN CONFIGURATION



DEVICE CHARACTERISTICS

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MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	350	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)										
PART NUMBER	DEVICE MARKING	V _{RWM} (V) (max.)	V _B (V) (min.)	I _T (mA)	V _C @1A (max.)	V _C (max.) (@A)		I _R (μA) (max.)	C _T 1 (pF) (typ.)	C _J 2 (pF) (typ.)
YSBLC03C	CC	3.3	4.0	1	7.50	13.9	8	40	1.0	0.4
YSBLC05C	AC	5.0	6.0	1	9.80	18.3	8	5	1.0	0.4
YSBLC08C	BC	8.0	8.5	1	13.40	18.5	8	2	1.0	0.4
YSBLC12C	DC	12.0	13.3	1	19.00	28.6	6	1	1.0	0.4
YSBLC15C	EC	15.0	16.7	1	24.00	31.8	5	1	1.0	0.4
YSBLC24C	HC	24.0	26.7	1	43.00	56.0	3	1	1.0	0.4

Note:

- 1.The Total capacitance, CT of the product @ F=1MHZ, applied 0VDC.
- 2.The Total capacitance, CJ of the single Dice @ F=1MHZ, applied 0VDC.

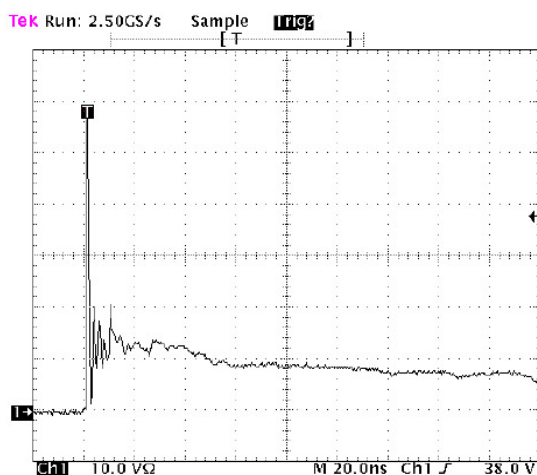


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

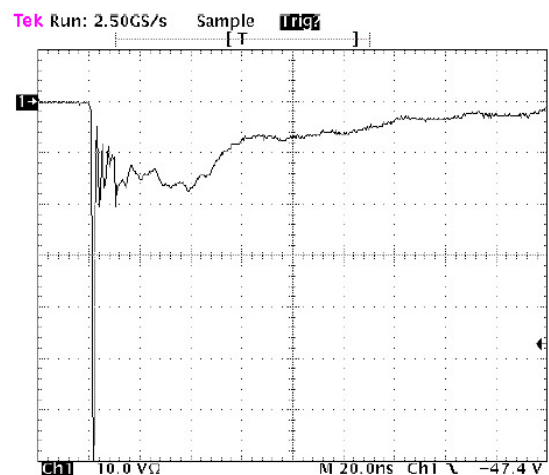
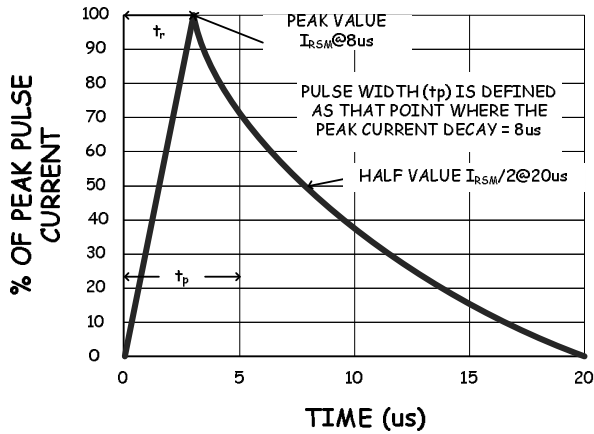


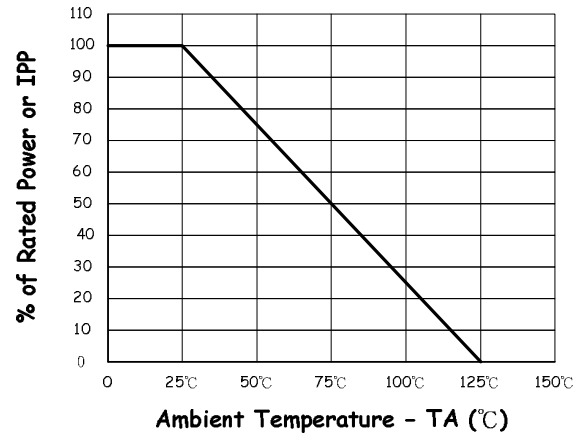
Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

DEVICE CHARACTERISTICS

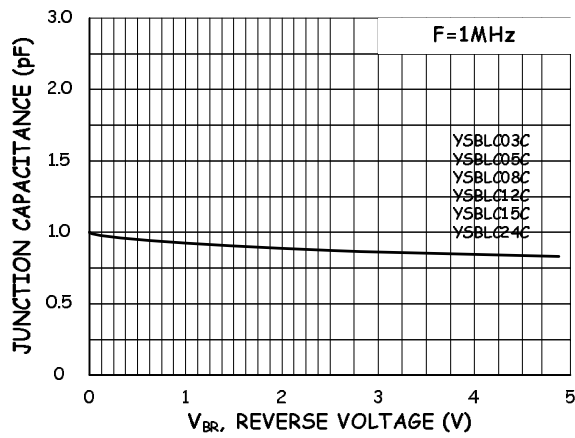
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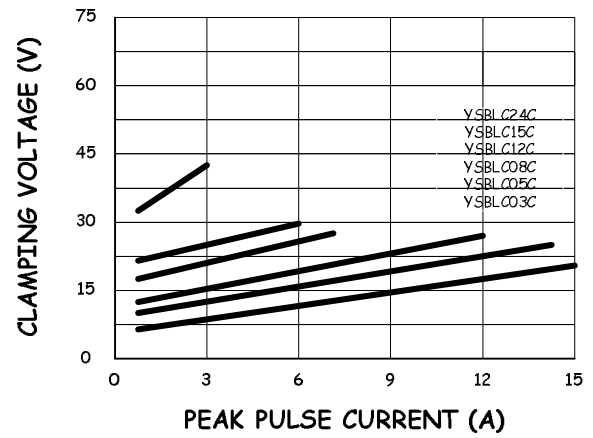
8/20 μs Pulse Waveform



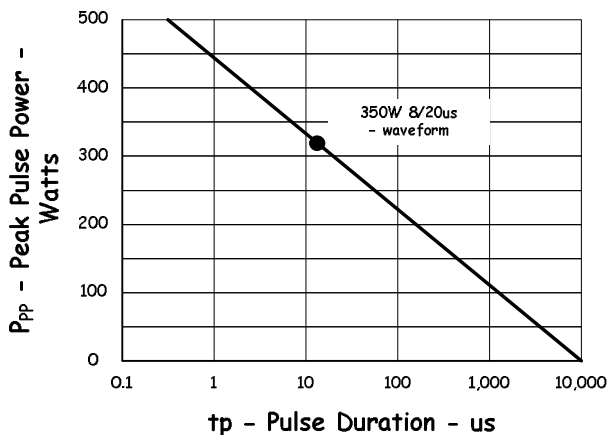
Power Derating Curve



Normalized Capacitance vs. Reverse Voltage



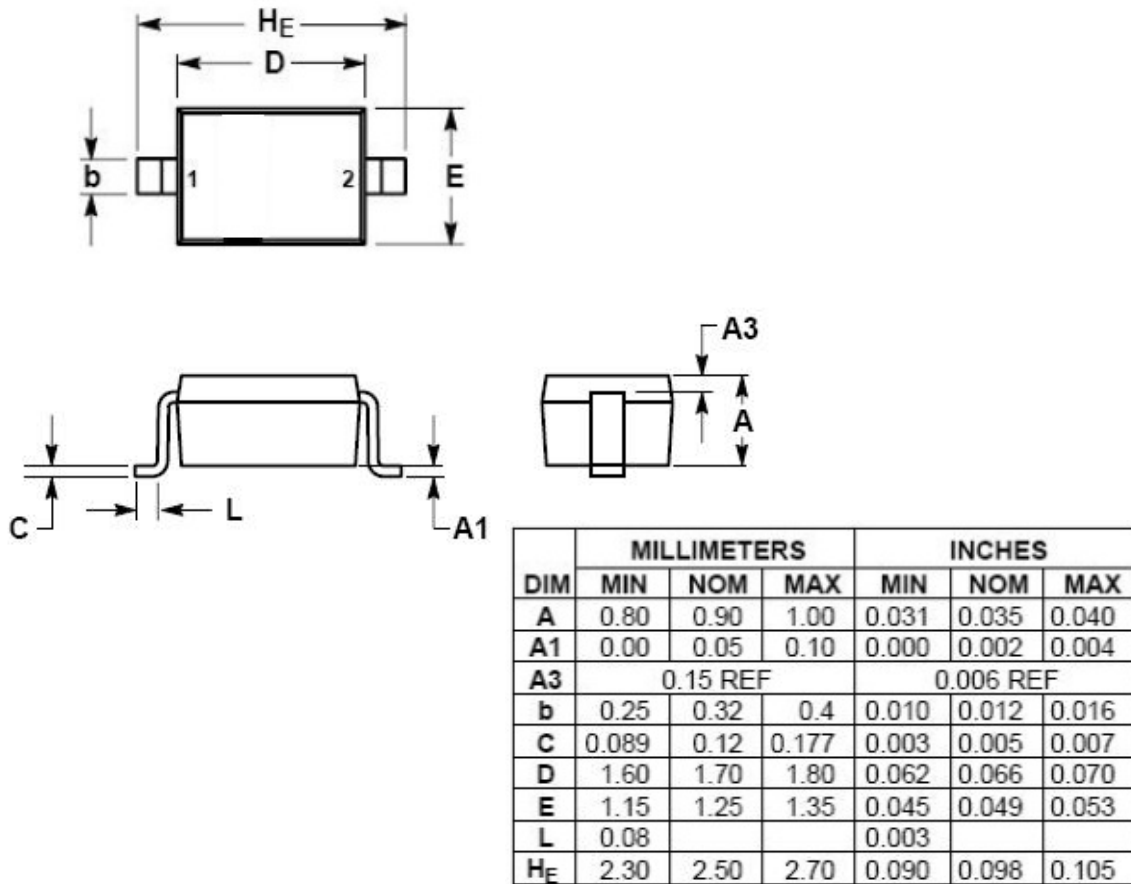
Clamping Voltage vs. Peak Pulse Current



Peak Pulse Power vs Pulse Time

PACKAGE OUTLINE & DIMENSIONS

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* SOLDERING FOOTPRINT

