Low Capacitance TVS Diode Array

APPLICATIONS

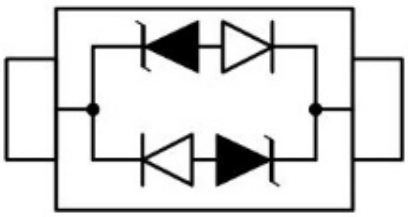
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- USB Interface

SOD-323

IEC COMPATIBILITY

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50 ns)
- IEC61000-4-5 (Lightning) 12A (8/20μs)

PIN CONFIGURATION



FEATURES

- 350 Watts Peak Pulse Power per Line (tp=8/20μs)
- 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 Millgrams (Approximate)
- Quantity Per Reel : 3,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

DEVICE CHARACTERISTICS

YSBLCxxC

MAXIMUM RATINGS (@ 25℃ 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.)	℃
Operating Temperature Range	T_J	-55 ~ 150	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃

ELECTRICAL CHARACTERISTICS PER LINE (@ 25℃ 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.)	V_C (@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.

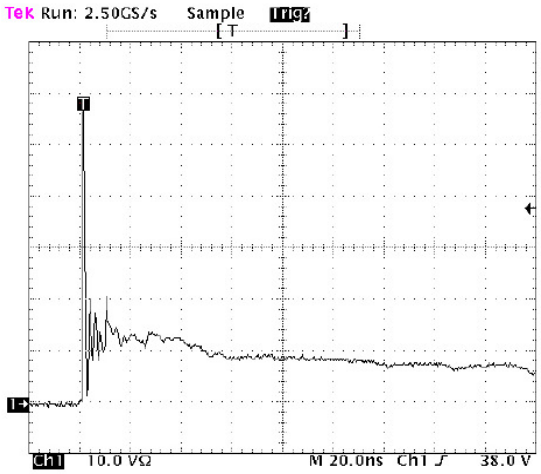


Figure 1. ESD Clamping Voltage Screenshot Positive 8 kV contact per IEC 61000-4-2

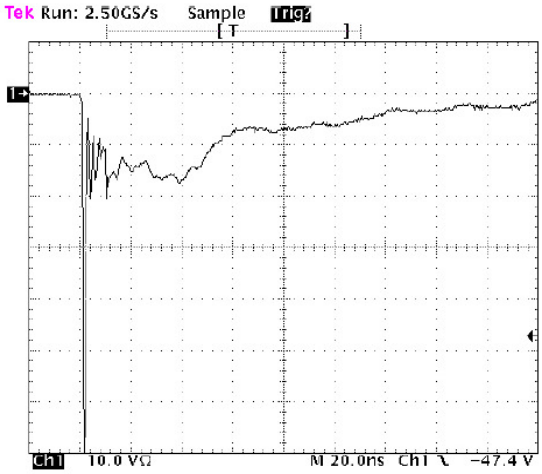


Figure 2. ESD Clamping Voltage Screenshot Negative 8 kV contact per IEC 61000-4-2

DEVICE CHARACTERISTICS

YSBLCxxC

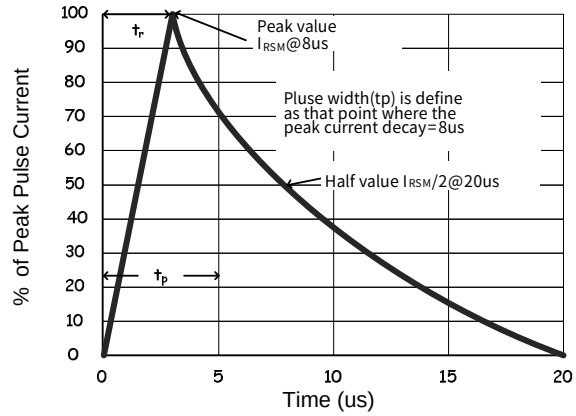


Figure 3. 8/20us Pulse Waveform

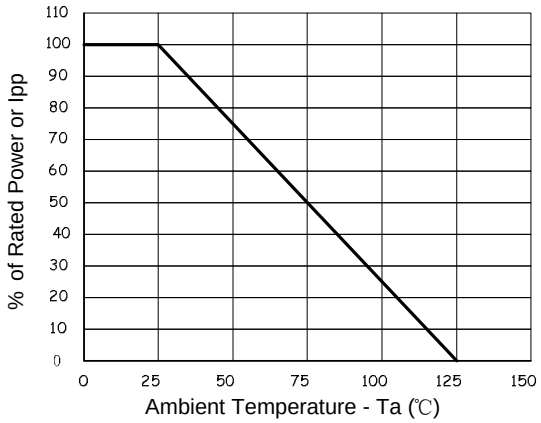


Figure 4. Power Derating Curve

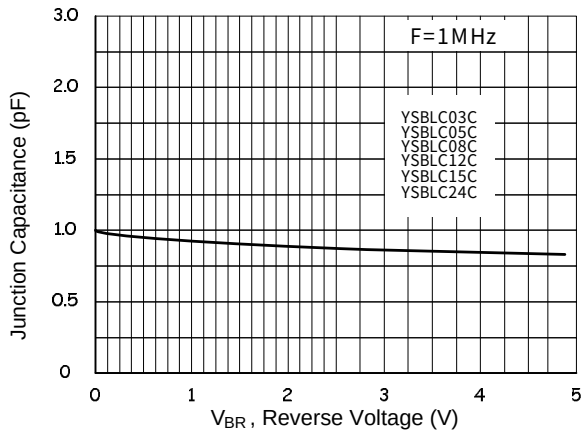


Figure 5. Normalized Capacitance vs. Reverse Voltage

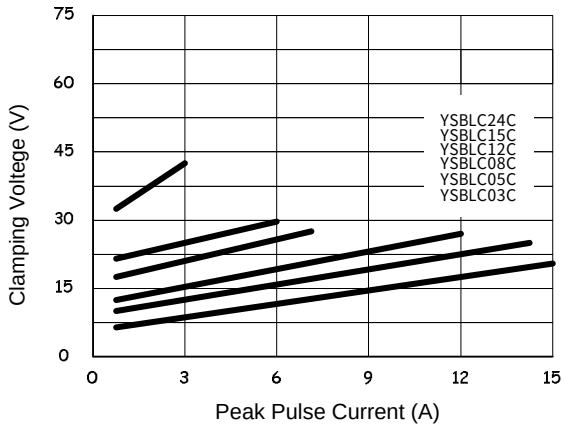


Figure 6. Clamping Voltage vs. Peak Pulse Current

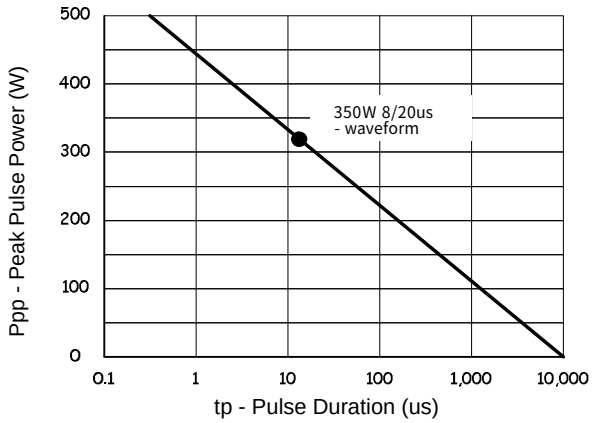
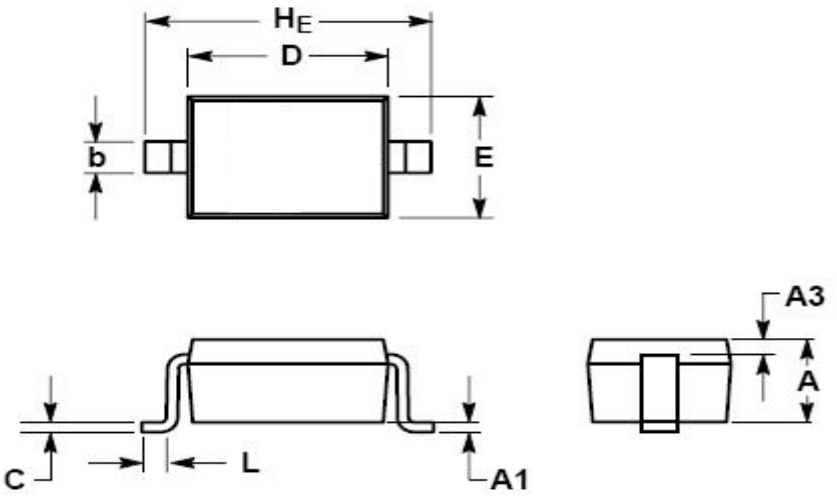


Figure 7. Peak Pulse Power vs. Pulse Time

PACKAGE OUTLINE & DIMENSIONS

YSBLCxxC



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08	-	-	0.003	-	-
H_E	2.30	2.50	2.70	0.090	0.098	0.105

* SOLDERING FOOTPRINT