

**SMB Series Features**

- 600 watt peak pulse power dissipation
- Available in voltages from 5.0V to 170V
- Unidirectional and bidirectional
- Glass passivated junction
- Low clamping factor
- Each device 100% surge tested

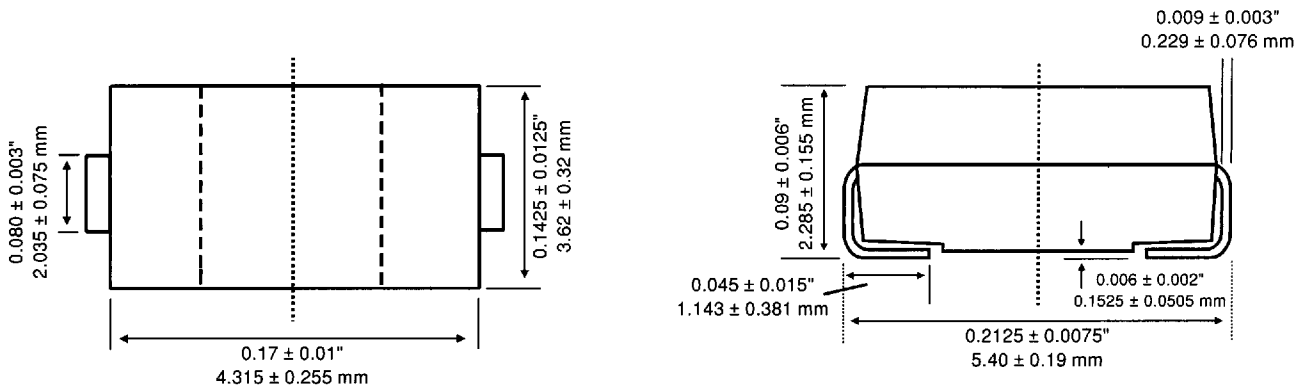
**Absolute Maximum Ratings**

- Peak pulse power dissipation ( $P_{PPM}$ ) at 25°C ..... 600W
- Steady state power dissipation at 25°C ..... 5W
- Operating and storage temperatures ..... -55°C to +150°C

**Mechanical Characteristics**

- DO214AA package
- UL94V-0 Thermoset Epoxy
- Solder plated terminals
- Solderable per MIL-STD-750 Method 2026

**Mechanical Dimensions**



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**Electrical Characteristics**

Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage $V_{WM}$ (Volts)	Breakdown Voltage		Maximum Stand By Current @ $V_{WM}+$ $I_b$ ( $\mu A$ )	Maximum Clamping Voltage @ $I_{PPM}^{\square}$ $V_c$ Max (Volts)	Rated Peak Impulse Current $I_{PPM}^{\square}$ (Amperes)
				$V_{BR}$ (Volts) Min	@ $I_T$ (mA)			
SMB5.0	KD	AD	5.0	6.40	10	800.0	9.6	62.5
SMB5.0A	KE	AE	5.0	6.40	10	800.0	9.2	65.2
SMB6.0	KF	AF	6.0	6.67	10	800.0	11.4	52.6
SMB6.0A	KG	AG	6.0	6.67	10	800.0	10.3	58.3
SMB6.5	KH	AH	6.5	7.22	10	500.0	12.3	48.7
SMB6.5A	KK	AK	6.5	7.22	10	500.0	11.2	53.6
SMB7.0	KL	AL	7.0	7.78	10	200.0	13.3	45.1
SMB7.0A	KM	AM	7.0	7.78	10	200.0	12.0	50.0
SMB7.5	KN	AN	7.5	8.33	1	100.0	14.3	42.0
SMB7.5A	KP	AP	7.5	8.33	1	100.0	12.9	46.5
SMB8.0	KQ	AQ	8.0	8.89	1	50.0	15.0	40.0
SMB8.0A	KR	AR	8.0	8.89	1	50.0	13.6	44.1
SMB8.5	KS	AS	8.5	9.44	1	20.0	15.9	37.7
SMB8.5A	KT	AT	8.5	9.44	1	20.0	14.4	41.7
SMB9.0	KU	AU	9.0	10.00	1	10.0	16.9	35.5
SMB9.0A	KV	AV	9.0	10.00	1	10.0	15.4	39.0
SMB10	KW	AW	10.0	11.10	1	5.0	18.8	31.9
SMB10A	KX	AX	10.0	11.10	1	5.0	17.0	35.3
SMB11	KY	AY	11.0	12.20	1	5.0	20.1	29.9
SMB11A	KZ	AZ	11.0	12.20	1	5.0	18.2	33.0
SMB12	LD	BD	12.0	13.30	1	5.0	22.0	27.3
SMB12A	LE	BE	12.0	13.30	1	5.0	19.9	30.2
SMB13	LF	BF	13.0	14.40	1	5.0	23.8	25.2
SMB13A	LG	BG	13.0	14.40	1	5.0	21.5	27.9
SMB14	LH	BH	14.0	15.60	1	5.0	25.8	23.3
SMB14A	LK	BK	14.0	15.60	1	5.0	23.2	25.8
SMB15	LL	BL	15.0	16.70	1	5.0	26.9	22.3
SMB15A	LM	BM	15.0	16.70	1	5.0	24.4	24.0
SMB16	LN	BN	16.0	17.80	1	5.0	28.8	20.8
SMB16A	LP	BP	16.0	17.80	1	5.0	26.0	23.1
SMB17	LQ	BQ	17.0	18.90	1	5.0	30.5	19.7
SMB17A	LR	BR	17.0	18.90	1	5.0	27.6	21.7
SMB18	LS	BS	18.0	20.00	1	5.0	32.2	18.6
SMB18A	LT	BT	18.0	20.00	1	5.0	29.2	20.5
SMB20	LU	BU	20.0	22.20	1	5.0	35.8	16.7
SMB20A	LV	BV	20.0	22.20	1	5.0	32.4	18.5
SMB22	LW	BW	22.0	24.40	1	5.0	39.4	15.2
SMB22A	LX	BX	22.0	24.40	1	5.0	35.5	16.9
SMB24	LY	BY	24.0	26.70	1	5.0	43.0	14.0
SMB24A	LZ	BZ	24.0	26.70	1	5.0	38.9	15.4
SMB26	MD	CD	26.0	28.90	1	5.0	46.6	12.4
SMB26A	ME	CE	26.0	28.90	1	5.0	42.1	14.2
SMB28	MF	CF	28.0	31.10	1	5.0	50.0	12.0
SMB28A	MG	CG	28.0	31.10	1	5.0	45.4	13.2
SMB30	MH	CH	30.0	33.30	1	5.0	53.5	11.2
SMB30A	MK	CK	30.0	33.30	1	5.0	46.6	12.4

Continued on Next Page

\* Add "C" or "CA" suffix for bidirectional device types

- For bidirectional types having  $V_{WM} \leq 10V$ , their  $I_T$  limit is doubled

$\square$  See page 9 for Impulse Current Waveform

**Electrical Characteristics (continued)**

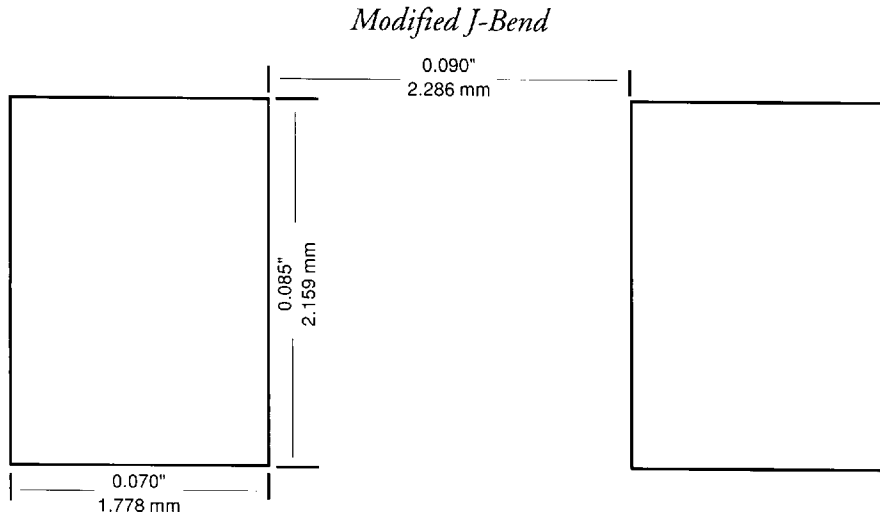
Part Number*	Uni Part Marking	Bi Part Marking	Rated Standoff Voltage $V_{WM}$ (Volts)	Breakdown Voltage		Maximum Stand By Current @ $V_{WM}^+$ $I_D$ ( $\mu A$ )	Maximum Clamping Voltage @ $I_{PPM}^{\square}$ $V_C$ Max (Volts)	Rated Peak Impulse Current $I_{PPM}^{\square}$ (Amperes)
				$V_{BR}$ (Volts) Min	@ $I_T$ (mA)			
SMB33	ML	CL	33.0	36.70	1	5.0	59.0	10.2
SMB33A	MM	CM	33.0	36.70	1	5.0	53.3	11.3
SMB36	MN	CN	36.0	40.00	1	5.0	64.3	9.3
SMB36A	MP	CP	36.0	40.00	1	5.0	58.1	10.3
SMB40	MQ	CQ	40.0	44.40	1	5.0	71.4	8.4
SMB40A	MR	CR	40.0	44.40	1	5.0	64.5	9.3
SMB43	MS	CS	43.0	47.80	1	5.0	76.7	7.8
SMB43A	MT	CT	43.0	47.80	1	5.0	69.4	8.6
SMB45	MU	CU	45.0	50.00	1	5.0	80.3	7.5
SMB45A	MV	CV	45.0	50.00	1	5.0	72.7	8.3
SMB48	MW	CW	48.0	53.30	1	5.0	85.5	7.0
SMB48A	MX	CX	48.0	53.30	1	5.0	77.4	7.7
SMB51	MY	CY	51.0	56.70	1	5.0	91.1	6.6
SMB51A	MZ	CZ	51.0	56.70	1	5.0	82.4	7.3
SMB54	ND	DD	54.0	60.00	1	5.0	96.3	6.2
SMB54A	NE	DE	54.0	60.00	1	5.0	87.1	6.9
SMB58	NF	DF	58.0	64.40	1	5.0	103.0	5.8
SMB58A	NG	DG	58.0	64.40	1	5.0	93.6	6.4
SMB60	NH	DH	60.0	66.70	1	5.0	107.0	5.6
SMB60A	NK	DK	60.0	66.70	1	5.0	96.8	6.2
SMB64	NL	DL	64.0	71.10	1	5.0	114.0	5.3
SMB64A	NM	DM	64.0	71.10	1	5.0	103.0	5.8
SMB70	NN	DN	70.0	77.80	1	5.0	125.0	4.8
SMB70A	NP	DP	70.0	77.80	1	5.0	113.0	5.3
SMB75	NQ	DQ	75.0	83.30	1	5.0	134.0	4.5
SMB75A	NR	DR	75.0	83.30	1	5.0	121.0	4.9
SMB78	NS	DS	78.0	86.70	1	5.0	139.0	4.3
SMB78A	NT	DT	78.0	86.70	1	5.0	126.0	4.7
SMB85	NU	DU	85.0	94.40	1	5.0	151.0	3.9
SMB85A	NV	DV	85.0	94.40	1	5.0	137.0	4.4
SMB90	NW	DW	90.0	100.00	1	5.0	160.0	3.8
SMB90A	NX	DX	90.0	100.00	1	5.0	146.0	4.1
SMB100	NY	DY	100.0	111.00	1	5.0	179.0	3.4
SMB100A	NZ	DZ	100.0	111.00	1	5.0	162.0	3.7
SMB110	PD	ED	110.0	122.00	1	5.0	196.0	3.0
SMB110A	PE	EE	110.0	122.00	1	5.0	177.0	3.4
SMB120	PF	EF	120.0	133.00	1	5.0	214.0	2.8
SMB120A	PG	EG	120.0	133.00	1	5.0	193.0	3.1
SMB130	PH	EH	130.0	144.00	1	5.0	231.0	2.6
SMB130A	PK	EK	130.0	144.00	1	5.0	209.0	2.9
SMB150	PL	EL	150.0	167.00	1	5.0	268.0	2.2
SMB150A	PM	EM	150.0	167.00	1	5.0	243.0	2.5
SMB160	PN	EN	160.0	178.00	1	5.0	287.0	2.1
SMB160A	PP	EP	160.0	178.00	1	5.0	259.0	2.3
SMB170	PQ	EQ	170.0	189.00	1	5.0	304.0	2.0
SMB170A	PR	ER	170.0	189.00	1	5.0	275.0	2.2

\* Add "C" or "CA" suffix for bidirectional device types  
 † For bidirectional types having  $V_{WM} \leq 10V$ , their  $I_D$  limit is doubled

□ See page 9 for Impulse Current Waveform

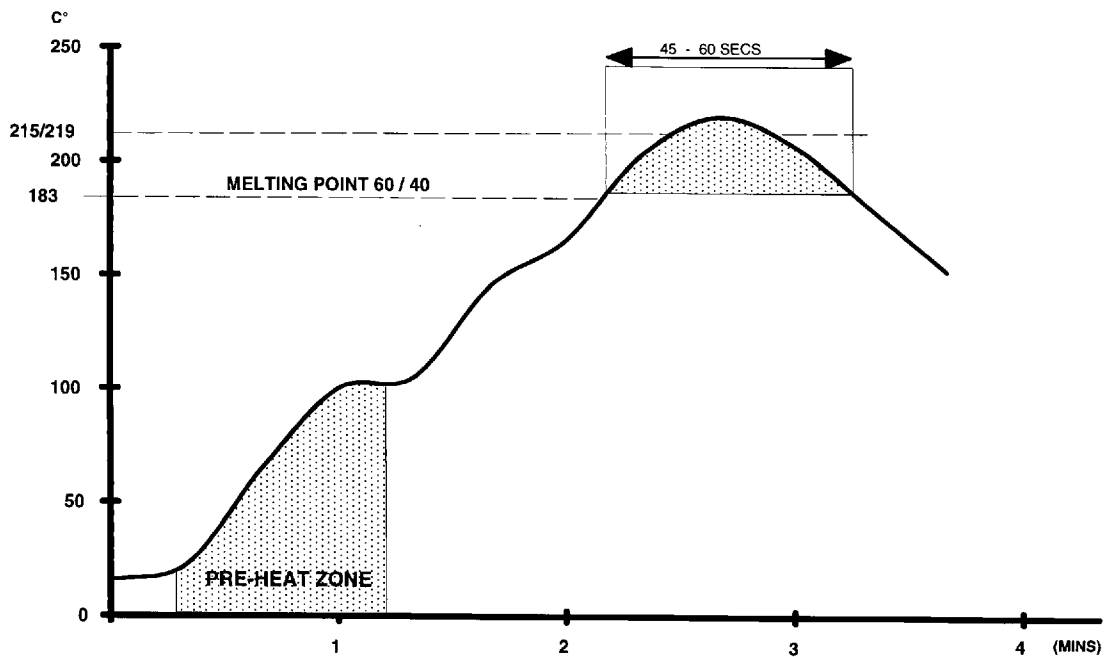
**Recommended Pad Size**

The pad dimensions should be 0.010" longer than the contact size in the lead axis. This allows the solder fillet to form.



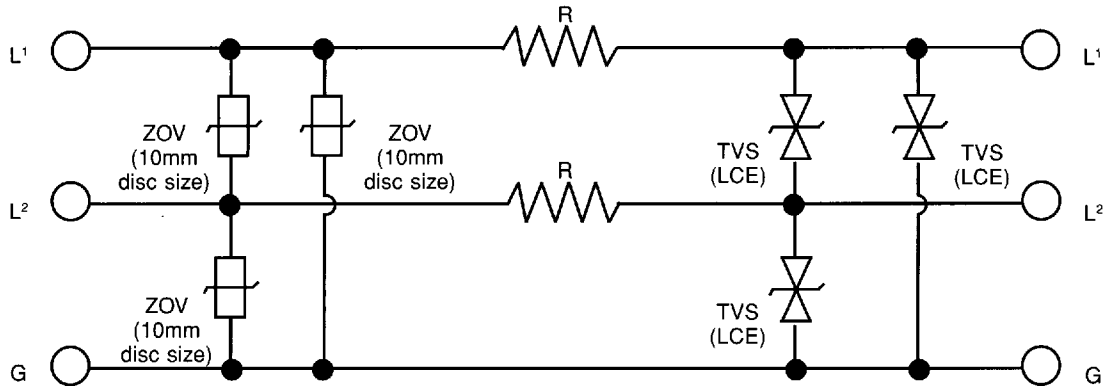
**Infrared Reflow Soldering**

Soldering with infrared results in the highest yields due to controlled heating rates and solder liquidity times. Only the dwell time and peak temperature limitations of resin molded compounds need be considered.

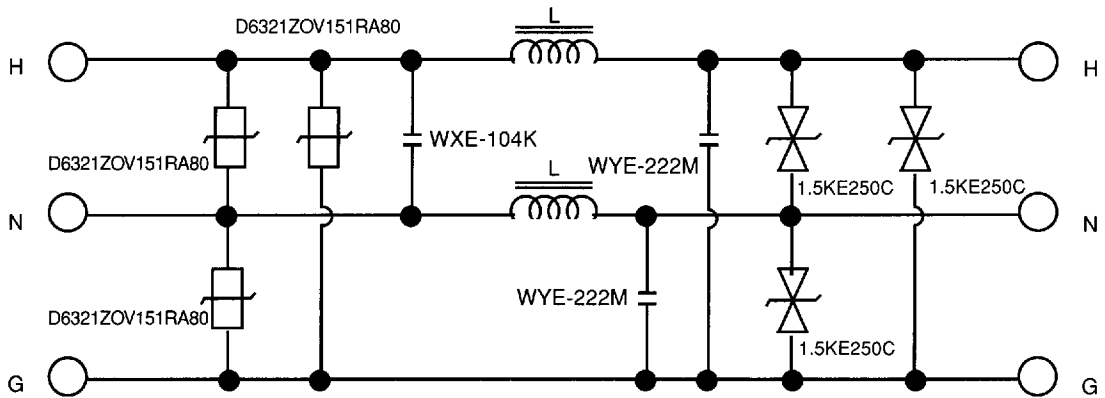


Conforms to EIA 481-1

**Data Line Protection**

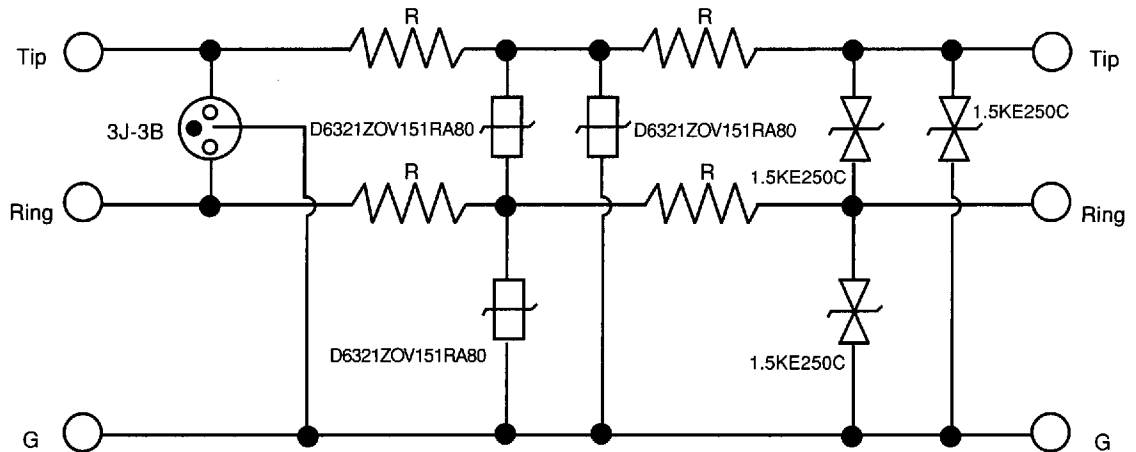


**AC Line Protection**



WXE = World Products RFI Suppressor "X Type" (Across-the-Line)  
 WYE = World Products RFI Suppressor "Y Type" (Line-to-Ground)

**Telecom Circuit Protection**



3J = Sankosha Gas Tube represented exclusively by World Products in North America.