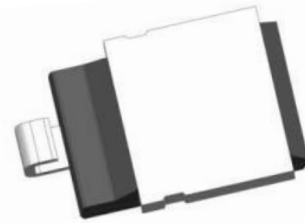
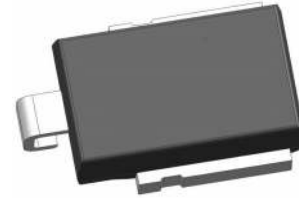


4.6 KW Surface Mount Transient Vol Tage Suppressor

Features

- ❖ ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- ❖ HBM $\geq \pm 8$ kV & CDM $\geq \pm 2$ kV
- ❖ Meets MSL Level 1 per J-STD-020
- ❖ Lead free in compliance with EU RoHS 2.0
- ❖ Green molding compound as per IEC 61249 standard
- ❖ P/N suffix V means AEC-Q101 qualified
- ❖ P/N suffix V means Halogen-free

DO-218



Mechanical Data

- ❖ **Case:** Molded plastic, DO-218
- ❖ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ❖ **Approx. Weight:** 0.099 ounces, 2.821 grams
Only suitable for P-type chip

Maximum Ratings and Thermal Characteristics (TA= 25 °C unless otherwise noted)

Parameter	Symbol	Limit	Units
10/1,000us Peak Pulse Power Dissipation	PPPM1 (1)	4600	W
10/10,000us Peak Pulse Power Dissipation	PPPM2	3600	W
Peak Surge Current (60Hz half wave)	IFSM	600	A
Typical Thermal Resistance Junction to Case	RθJC	0.95	°C/W
Power Dissipation on infinite heatsink TC = 25 °C	PD	6	W
ISO10605(C 330 pF,R 330Ω) Contact	VESD	30	kV
ISO10605(C 330 pF,R 330Ω) Air	VESD	30	kV
Operating and Storage Temperature Range	TJ,TSTG	-55 to 175	°C

Electrical Characteristics (TA= 25°C unless otherwise noted)

Part Number	VRWM	VBR			Reverse Leakage		Vc @ IPP ⁽¹⁾	
		Min.	Max.	IT	IR@VRWM	IR@VRWM TJ 175 °C		
	V	V	V	mA	uA	uA	V	A
4600W Transient Voltage Suppressor								
SM6S14A/CAV	14	15.6	17.2	5	1	150	23.2	198
SM6S15A/CAV	15	16.7	18.5	5	1	150	24.4	189
SM6S16A/CAV	16	17.8	19.7	5	1	150	26	177
SM6S17A/CAV	17	18.9	20.9	5	1	150	27.6	167
SM6S18A/CAV	18	20	22.1	5	0.5	150	29.2	158
SM6S20A/CAV	20	22.2	24.5	5	0.5	150	32.4	142
SM6S22A/CAV	22	24.4	26.9	5	0.5	150	35.5	130
SM6S24A/CAV	24	26.7	29.5	5	0.5	150	38.9	118
SM6S26A/CAV	26	28.9	31.9	5	0.5	150	42.1	109
SM6S28A/CAV	28	31.1	34.4	5	0.5	150	45.4	101
SM6S30A/CAV	30	33.3	36.8	5	0.5	150	48.4	95
SM6S33A/CAV	33	36.7	40.6	5	0.5	150	53.3	86
SM6S36A/CAV	36	40	44.2	5	0.5	150	58.1	79
SM6S40A/CAV	40	44.4	49.1	5	0.5	150	64.5	71
SM6S43A/CAV	43	47.8	52.8	5	0.5	150	69.4	66
SM6S48A/CAV	48	53.3	58.7	5	0.5	150	80.6	57

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig.1
2. TVS is a transient protection device, it is strongly recommended not to use as a Zener.
3. Add suffix "CA" after part number to specify Bi-directional devices

RATING AND CHARACTERISTICS CURVES (SM6S14AV THRU SM6S48CAV)

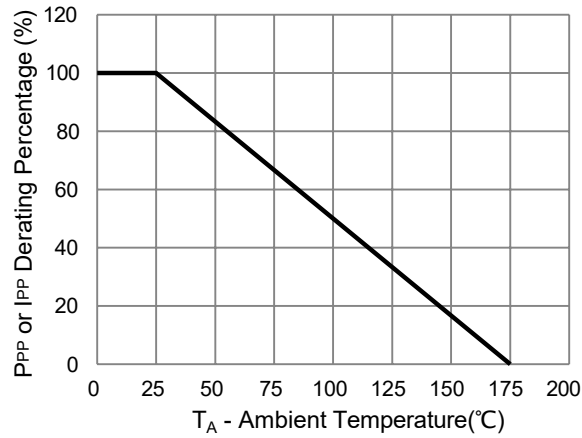


Fig.1 Pulse Power Rating Curve

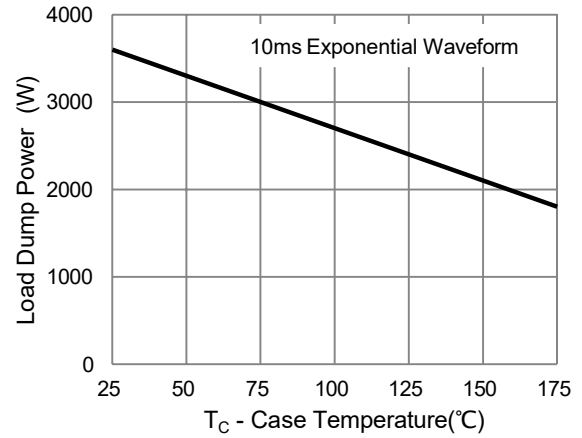


Fig.2 Load Dump Power Characteristics

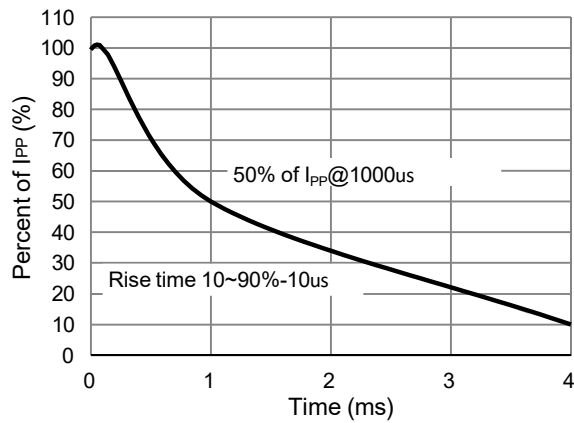


Fig.3 Pulse Waveform

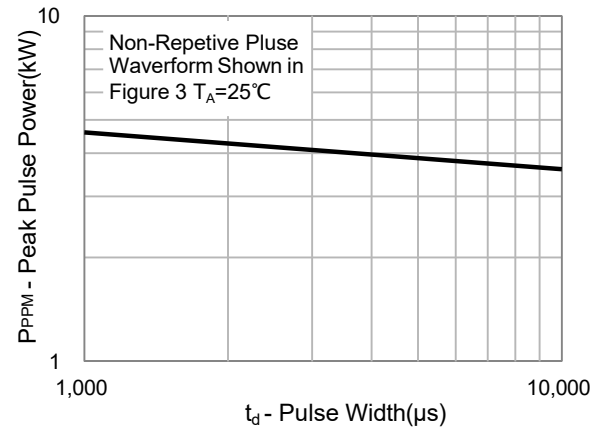


Fig.4 Peak Pulse Power Rating Curve

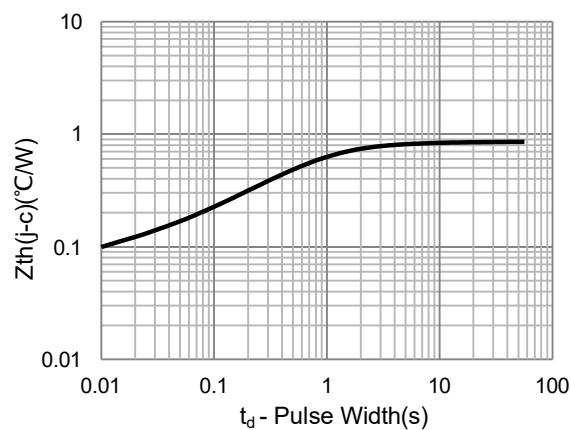


Fig.5 Typical Transient Thermal Impedance

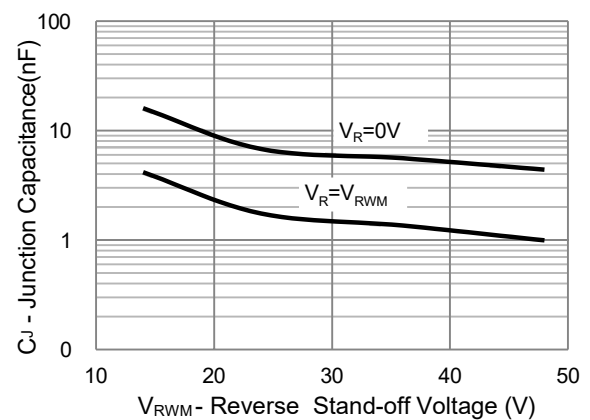


Fig.6 Typical Capacitance

RATING AND CHARACTERISTICS CURVES (SM6S14AV THRU SM6S48CAV)

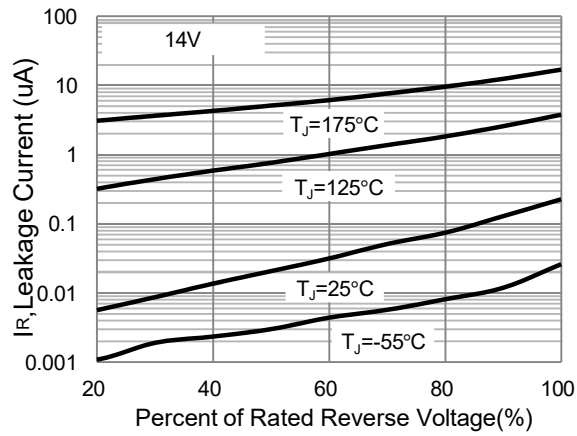


Fig.7 Typical Reverse Characteristics

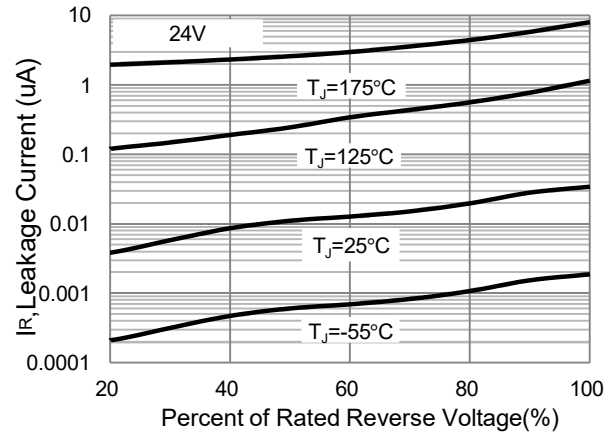


Fig.8 Typical Reverse Characteristics

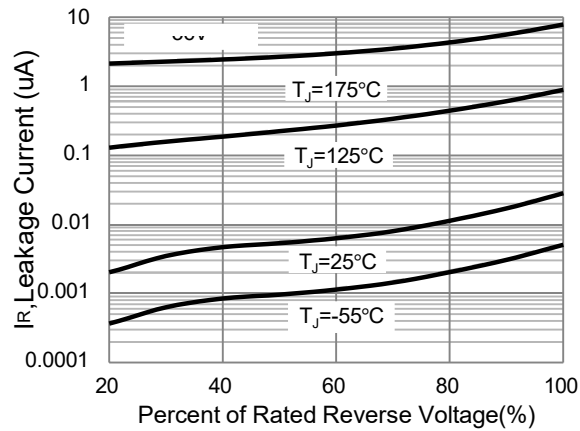


Fig.9 Typical Reverse Characteristics

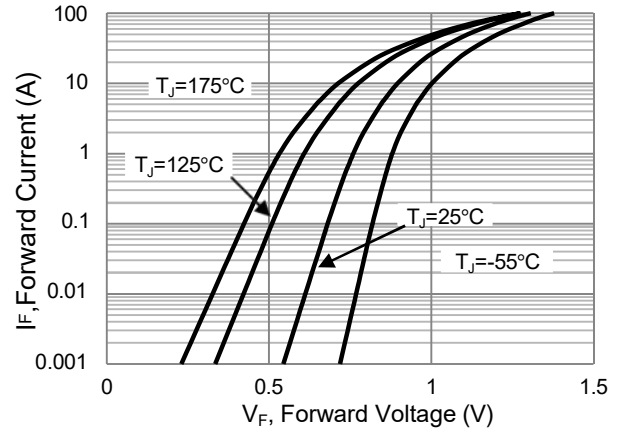
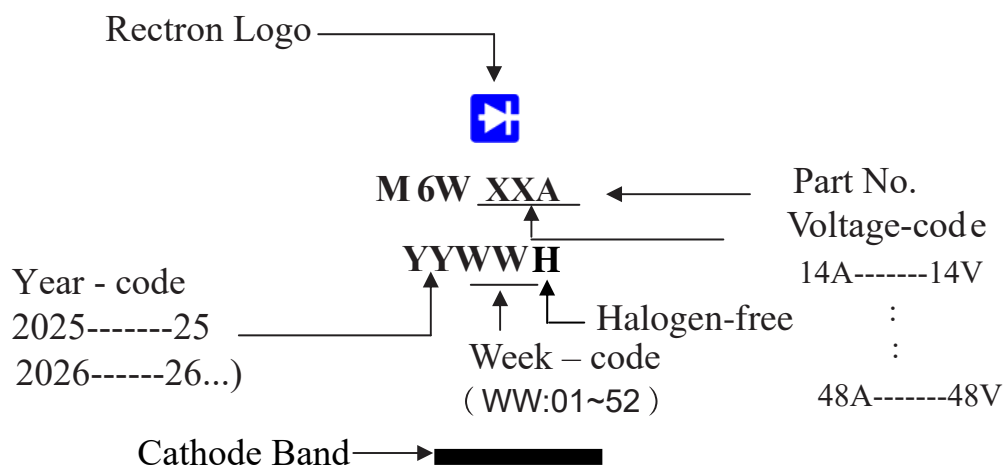


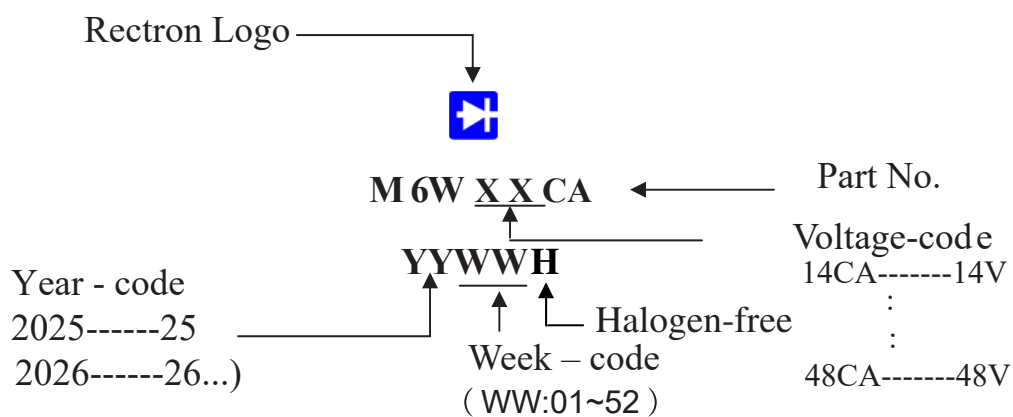
Fig.10 Typical Forward Characteristics

Marking Description

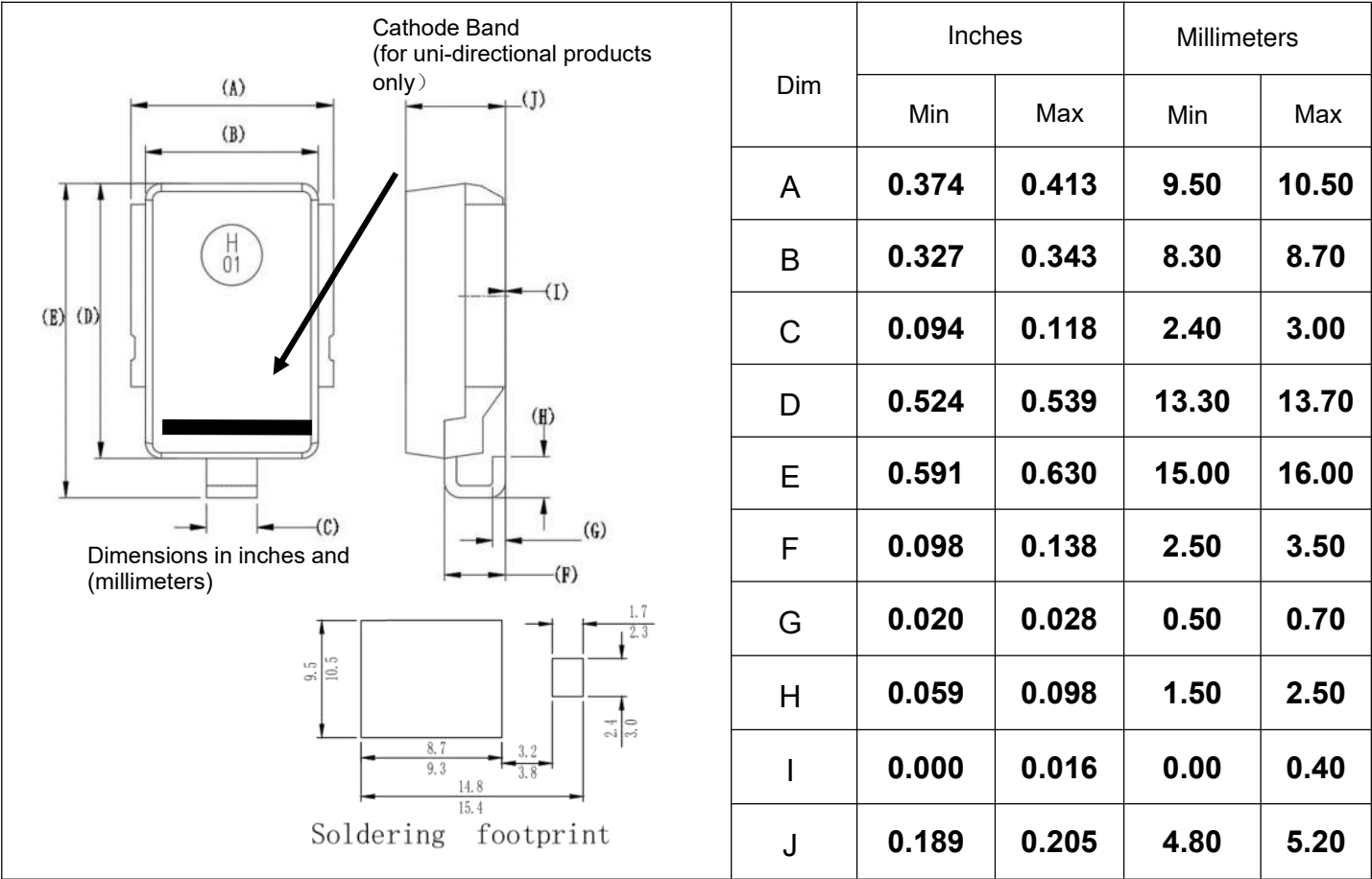
1) SM6SxxA



2) SM6SxxCA



Dimensions (DO-218)

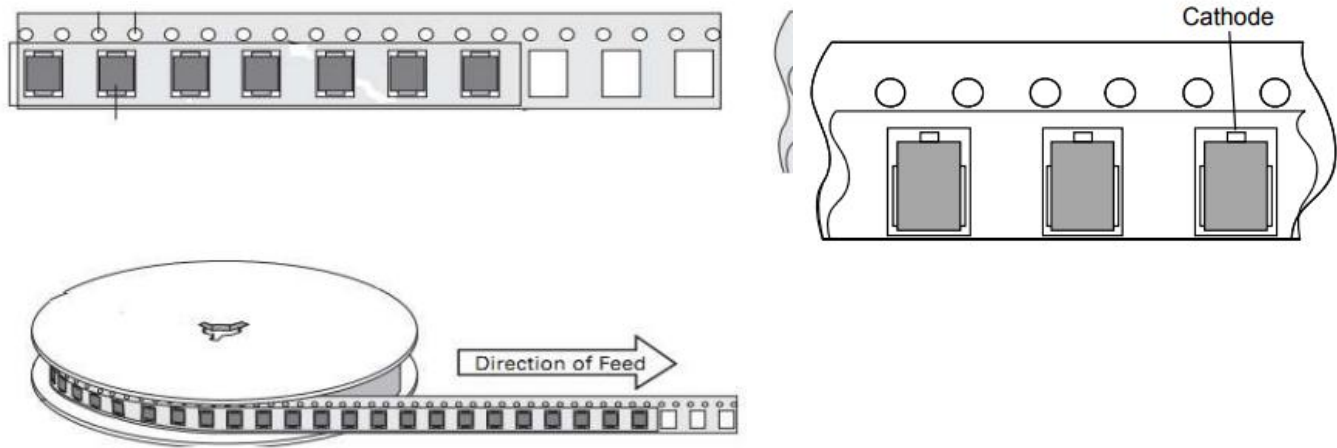


PACKAGING OF DIODE AND BRIDGE RECTIFIERS

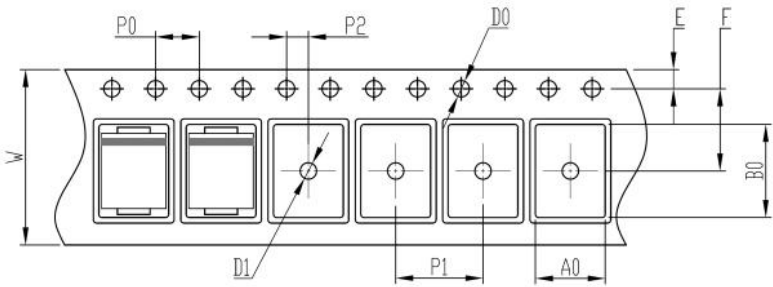
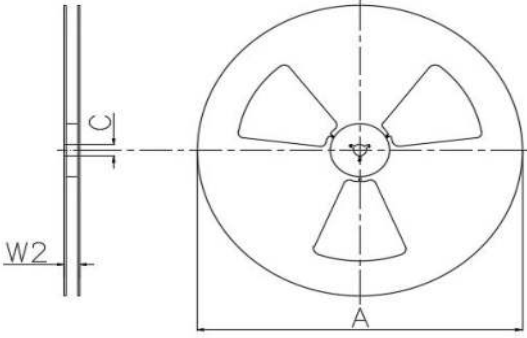
REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO218	-W	750	750	330	430*430*425	6,000	20.8

Taping Orientation



Packaging

Tape	Symbol	Dimension (mm)
	W	24±0.3
	E	1.75±0.3
	F	11.5±0.3
	D0	1.50±0.3
	D1	1.5±0.3
	P0	4.0±0.3
	P1	16±0.3
	P2	2.0±0.3
	A0	10.6±0.3
	B0	15.9±0.3
	K0	5.85±0.3
	A	330±2
	C	13±0.5
	W2	29±2

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.