

January 29, 1998

**HIGH VOLTAGE, HIGH CURRENT, HIGH DENSITY,
STANDARD RECOVERY RECTIFIER ASSEMBLY**

**QUICK REFERENCE
DATA**

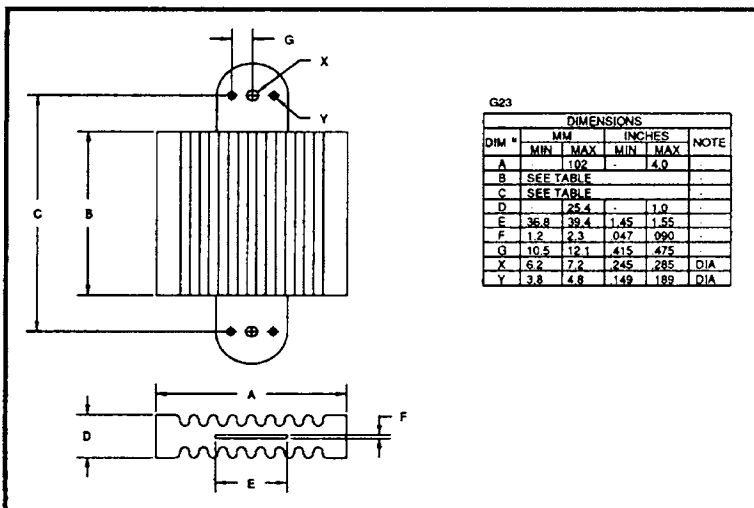
- Up to 96kV reverse voltage
- Air or oil environment
- Low reverse leakage currents
- High thermal shock resistance
- Integral cooling fins.

- $V_R = 16kV - 96kV$
- $I_F = 3.8 - 5.0A$ (in oil)
- $I_R = 1.0\mu A$
- $I_{FSM} = 150A$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$				1 Cycle Surge Current $t_p = 8.3ms$ I_{FSM}		Repetitive Surge Current I_{FRM} $t_p = 8.3ms$	
		air @ 25 °C	air @ 65 °C	forced air 600CFM @ 55°C	still oil @ 55 °C	@ 25 °C	@ 100 °C	@ 25 °C	@ 25 °C
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	A^2S
S1KW16KA-1	16000	2.0	1.4	4.0	5.0	↑	↑	↑	↑
S1KW32KA-2	32000	1.5	1.0	3.0	3.8	↑	↑	↑	↑
S1KW48KA-3	48000	1.5	1.0	3.0	3.8	150	100	25.0	93.4
S1KW64KA-4	64000	1.5	1.0	3.0	3.8	↓	↓	↓	↓
S1KW80KA-5	80000	1.5	1.0	3.0	3.8	↓	↓	↓	↓
S1KW96KA-6	96000	1.5	1.0	3.0	3.8	↓	↓	↓	↓

MECHANICAL



Dimensions (see drawing)	
B (max)	C (max)
inches	inches
4.780	6.480
7.980	9.680
11.18	12.88
14.38	16.08
17.58	19.28
20.78	22.48

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CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 3.0A @ 25°C	Maximum Reverse Recovery Time ¹ t_{rr} @ 25°C
	@ 25 °C	@ 100 °C		
	μA	μA	Volts	μS
S1KW16KA-1	↑ 1.0 ↓	↑ 20 ↓	16	↑ 2.0 ↓
S1KW32KA-2			32	
S1KW48KA-3			48	
S1KW64KA-4			64	
S1KW80KA-5			80	
S1KW96KA-6			72	

¹ Measured on discrete devices prior to assembly

Operating temperature range -55 °C to +150 °C
Storage temperature range -55 °C to +150 °C

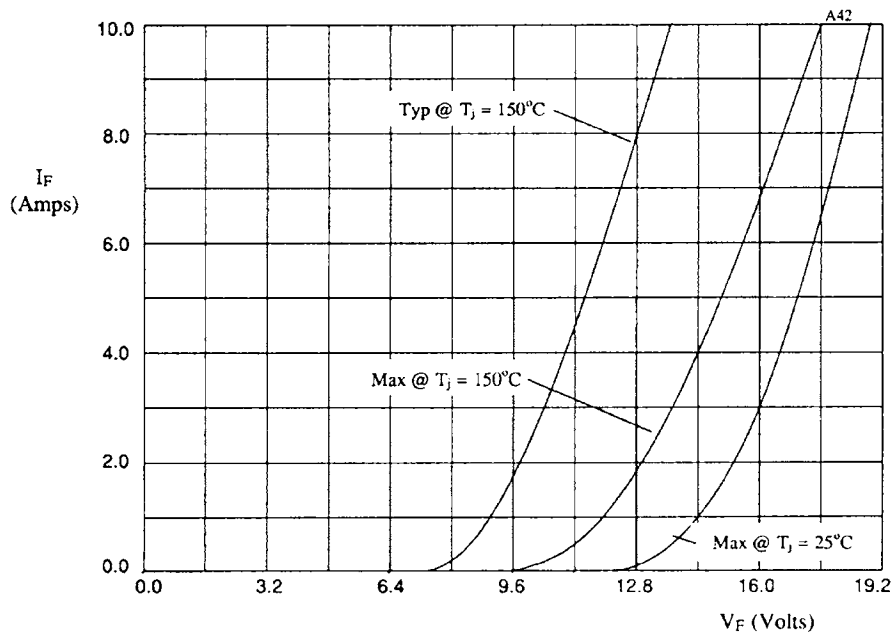


Figure 1. Forward voltage drop as a function of forward current.

TABLE I

DEVICE	X-axis
S1KW16KA-1	x1
S1KW32KA-2	x2
S1KW48KA-3	x3
S1KW64KA-4	x4
S1KW80KA-5	x5
S1KW96KA-6	x6