

January 9, 1998

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HIGH VOLTAGE, HIGH CURRENT, STANDARD RECOVERY DOUBLER AND CENTER TAPS

- Up to 48kV reverse voltage
- Air or oil environment
- High reverse surge current
- High thermal shock resistance
- Integral cooling fins

QUICK REFERENCE DATA

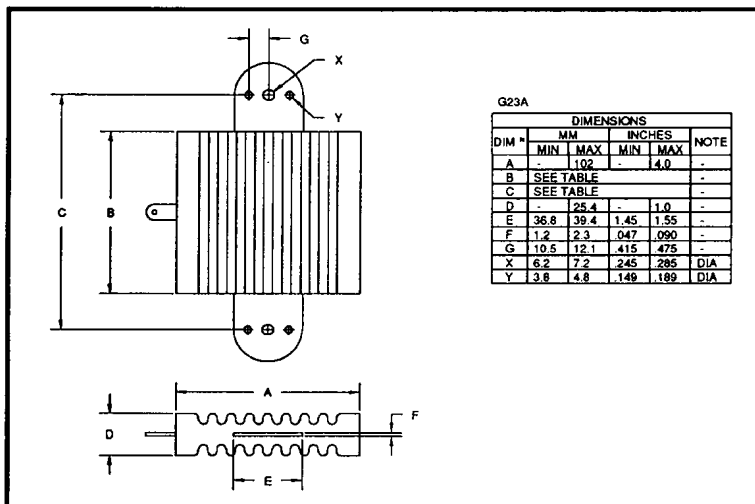
- $V_R = 8kV - 48kV$
- $I_F = 7.5 - 10.0A$ (in oil)
- $I_R = 1.0 \mu A$
- $I_{FSM} = 150 A$

ABSOLUTE MAXIMUM RATINGS (apply per leg)

Device Type	Working Reverse Voltage V _{RWM}	Average Rectified Current				1 Cycle Surge Current t _p = 8.3mS		Repetitive Surge Current	I ² t t _p = 8.3mS
		air @ 25 °C	air @ 65 °C	forced air 600CFM @ 55 °C	in oil @ 25 °C	@ 25 °C	@ 100 °C		
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps
S1KW8C-1*	8000	4.0	2.75	8.0	10.0	↑	↑	↑	↑
S1KW16C-2*	16000	3.0	2.0	6.0	7.5	↑	↑	↑	↑
S1KW24C-3*	24000	3.0	2.0	6.0	7.5	150	100	45	90
S1KW32C-4*	32000	3.0	2.0	6.0	7.5	↓	↓	↓	↓
S1KW40C-5*	40000	3.0	2.0	6.0	7.5	↓	↓	↓	↓
S1KW48C-6*	48000	3.0	2.0	6.0	7.5	↓	↓	↓	↓

* add suffix for desired circuit arrangement
D = doubler, N = Negative center tap, P = positive center tap
($I_O \times 0.5$ for doubler)

MECHANICAL



Dimensions (see drawing)	
B ±0.030"	C ±0.030"
inches	inches
4.78	6.48
7.98	9.68
11.18	12.88
14.38	16.08
17.58	19.28
20.78	22.48

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CHARACTERISTICS (apply per leg)

Device Type	Reverse Current @ 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
S1KW8C-1*	1.0	20	8	2.0
S1KW16C-2*			16	
S1KW24C-3*			24	
S1KW32C-4*			32	
S1KW40C-5*			40	
S1KW48C-6*			48	

¹ Measured on discrete devices prior to assembly

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

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

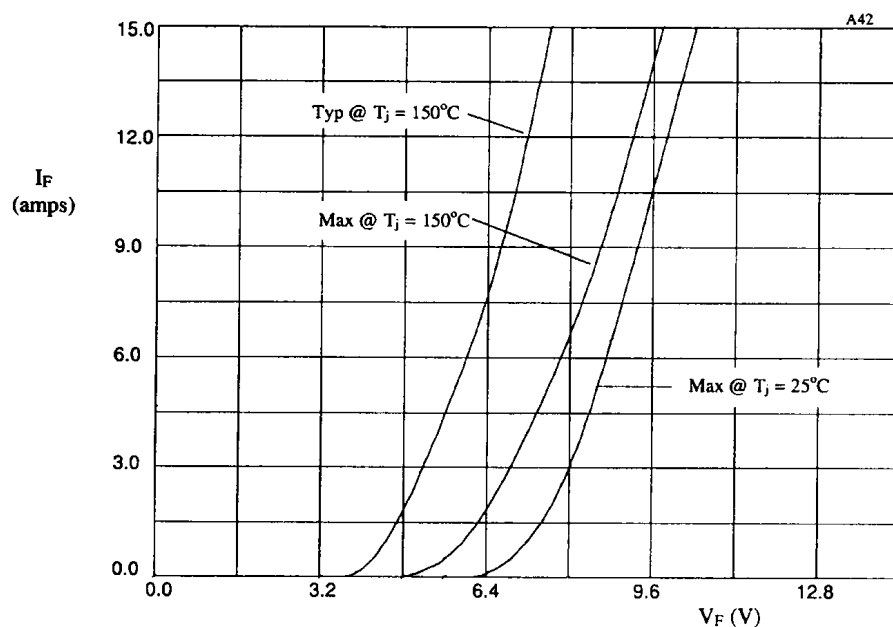


TABLE 1

DEVICE	X-axis
S1KW8C-1*	x1
S1KW16C-2*	x2
S1KW24C-3*	x3
S1KW32C-4*	x4
S1KW40C-5*	x5
S1KW48C-6*	x6

Figure 1. Forward voltage drop per leg as a function of forward current for use with table 1.