

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

- Up to 24kV reverse voltage
- Air or oil environment
- High reverse surge current
- High thermal shock resistance
- Integral cooling fins

## QUICK REFERENCE DATA

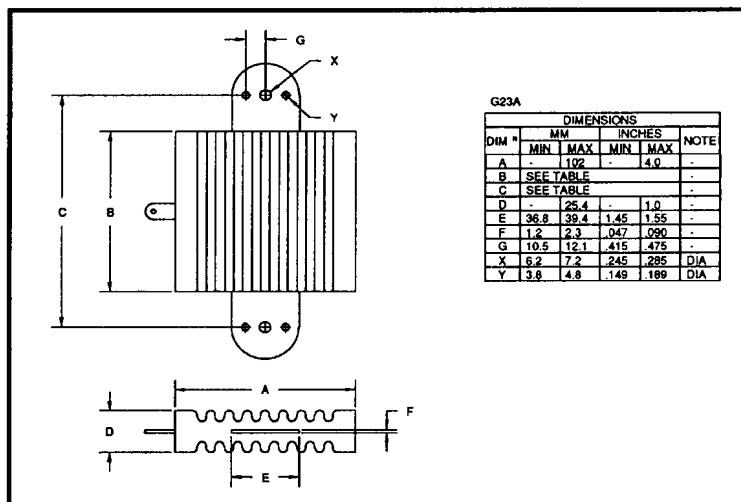
- $V_R = 4kV - 24kV$
- $I_F = 15 - 20A$  (in oil)
- $I_R = 2.0\mu A$
- $I_{FSM} = 250A$

### ABSOLUTE MAXIMUM RATINGS (apply per leg)

Device Type	Working Reverse Voltage $V_{RWM}$ Volts	Average Rectified Current				1 Cycle Surge Current $t_p = 8.3mS$		Repetitive Surge Current Amps	$I^2t$ $t_p = 8.3mS$ A <sup>2</sup> S
		air @ 25°C	air @ 65°C	forced air 600CFM @ 55°C	in oil @ 25°C	@ 25°C	@ 100°C		
		Amps	Amps	Amps	Amps	Amps	Amps		
S2KW4C-1*	4000	8.0	5.5	16	20	↑	↑	↑	↑
S2KW8C-2*	8000	6.0	4.1	12	15				
S2KW12C-3*	12000	6.0	4.1	12	15	250	150	45.0	240
S2KW16C-4*	16000	6.0	4.1	12	15	↓	↓	↓	↓
S2KW20C-5*	20000	6.0	4.1	12	15				
S2KW24C-6*	24000	6.0	4.1	12	15				

\* 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 @ VRWM		Maximum Forward Voltage $V_F @ 6.0A @ 25^\circ C$	Maximum Reverse Recovery Time <sup>1</sup> $t_{rr} @ 25^\circ C$
	@ 25 °C	@ 100 °C		
	μA	μA	Volts	μS
S2KW4C-1*	↑ 2.0 ↓	↑ 40 ↓	4.0	↑ 2.0 ↓
S2KW8C-2*			8.0	
S2KW12C-3*			12	
S2KW16C-4*			16	
S2KW20C-5*			20	
S2KW24C-6*			24	

<sup>1</sup> Measured on discrete devices prior to assembly

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

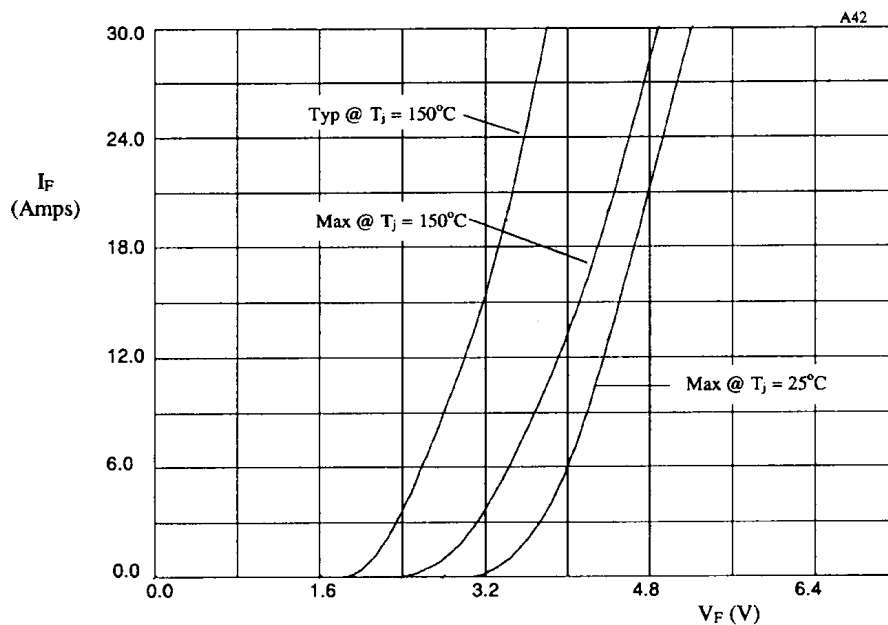


Figure 1. Forward voltage drop per leg as a function of forward current for use with table 1.

TABLE 1

DEVICE	X-axis
S2KW4C-1*	x1
S2KW8C-2*	x2
S2KW12C-3*	x3
S2KW16C-4*	x4
S2KW20C-5*	x5
S2KW24C-6*	x6

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## Semtech:

[S2KW16KA-2](#) [S2KW16C-4P](#) [S2KW16C-4N](#) [S2KW16C-4D](#) [S2KW8C-2P](#) [S2KW4C-1P](#) [S2KW24C-6P](#) [S2KW4C-1D](#)  
[S2KW8C-2N](#) [S2KW20C-5N](#) [S2KW20C-5D](#) [S2KW24C-6D](#) [S2KW4C-1N](#) [S2KW12C-3D](#) [S2KW24C-6N](#) [S2KW12C-3N](#) [S2KW12C-3P](#) [S2KW8C-2D](#) [S2KW20C-5P](#)