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# SEMTECH

**STANDARD RECOVERY  
 HIGH VOLTAGE DOUBLER  
 AND CENTER TAPS**

**SDHD5KS SDHD10KS  
 SDHN5KS SDHN10KS  
 SDHP5KS SDHP10KS**

January 9, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

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

- Low reverse leakage currents
- Corona free design
- Easy aluminum base mount
- Low forward voltage drop
- Up to 10kV reverse voltage

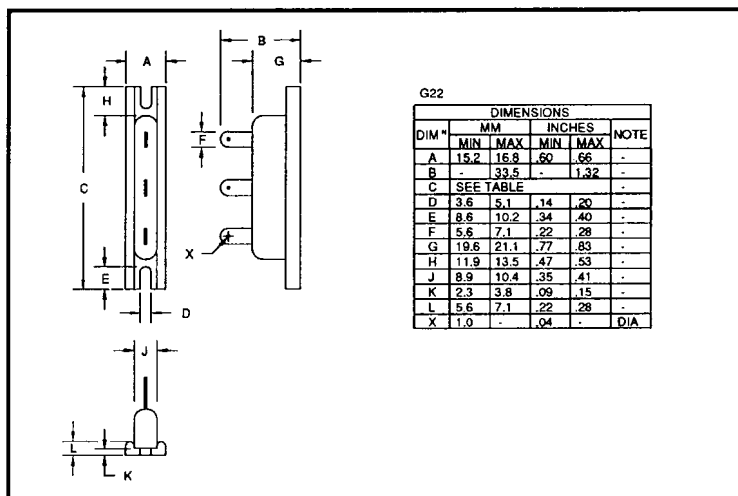
## QUICK REFERENCE DATA

- $V_R = 5kV \text{ \& } 10kV$
- $I_F = 5.0A$
- $t_{rr} = 2.0\mu S$
- $I_R = 1.0\mu A$

## ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current		1 Cycle Surge Current $t_p = 8.3ms$ @ 25°C	Operating and storage temp. ranges. $T_{OP} \text{ \& } T_{STC}$	Case Length
		air 25°C	oil 55°C			
		Volts	Amps			Amps
SDHD5KS SDHD10KS	5000 10000	2.5 2.5	2.5 2.5	150 150	-55 to +150	4.72 6.09
SDHN5KS SDHN10KS	5000 10000	5.0 5.0	5.0 5.0	150 150	-55 to +150	4.72 6.09
SDHP5KS SDHP10KS	5000 10000	5.0 5.0	5.0 5.0	150 150	-55 to +150	4.72 6.09

## MECHANICAL



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**CHARACTERISTICS** (ratings apply per leg)

Device Type	Reverse Current @ $V_{RWM}$		Maximum Forward Voltage $V_F @ 3.0A @ 25^\circ C$	Maximum Reverse Recovery Time <sup>1</sup> @ $25^\circ C$
	@ $25^\circ C$	@ $100^\circ C$		
	$\mu A$	$\mu A$	Volts	$\mu S$
SDHD5KS	1.0	25	6.0	$\updownarrow$ 2.0 $\updownarrow$
SDHD10KS	1.0	25	12.0	
SDHN5KS	1.0	25	6.0	
SDHN10KS	1.0	25	12.0	
SDHP5KS	1.0	25	6.0	
SDHP10KS	1.0	25	12.0	

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

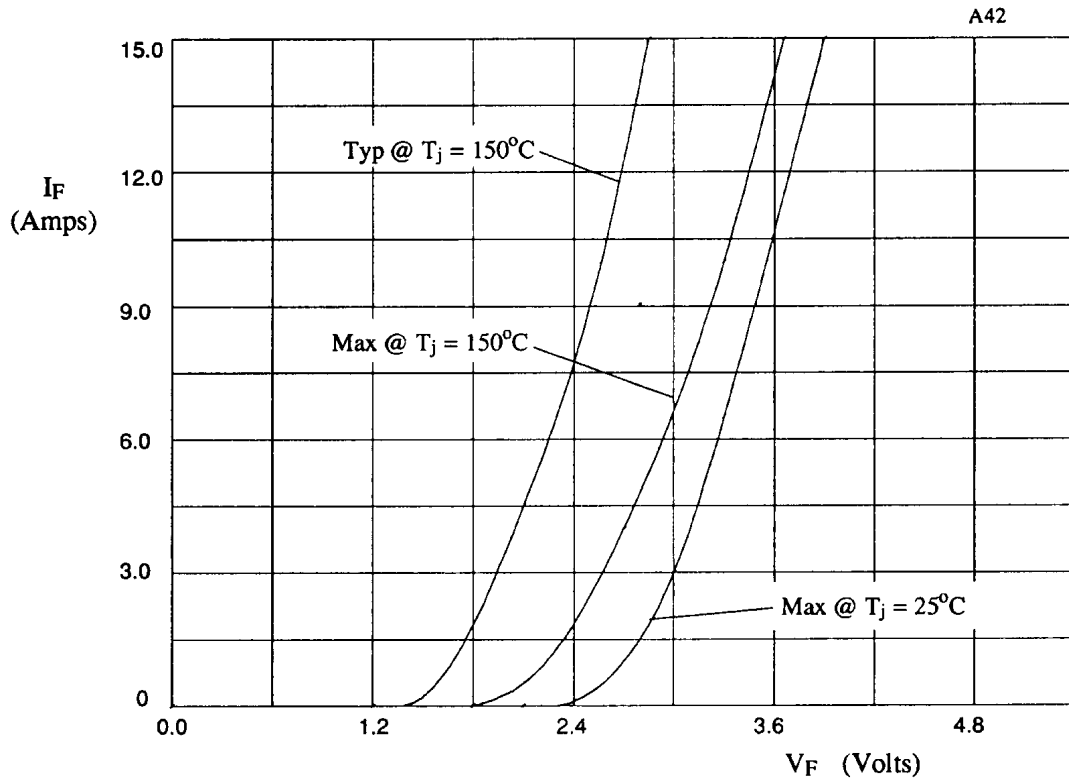


Figure 1. Forward voltage drop per leg as a function of forward current for SDH\*5KS.  
For SDH\*10KS multiply X-axis by 2.