

January 8, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:<http://www.semtech.com>HIGH VOLTAGE, HIGH DENSITY, FAST RECOVERY
MODULAR RECTIFIER ASSEMBLY

- Low reverse recovery time
- Modular construction
- Low reverse leakage current
- High thermal shock resistance
- Provides design versatility

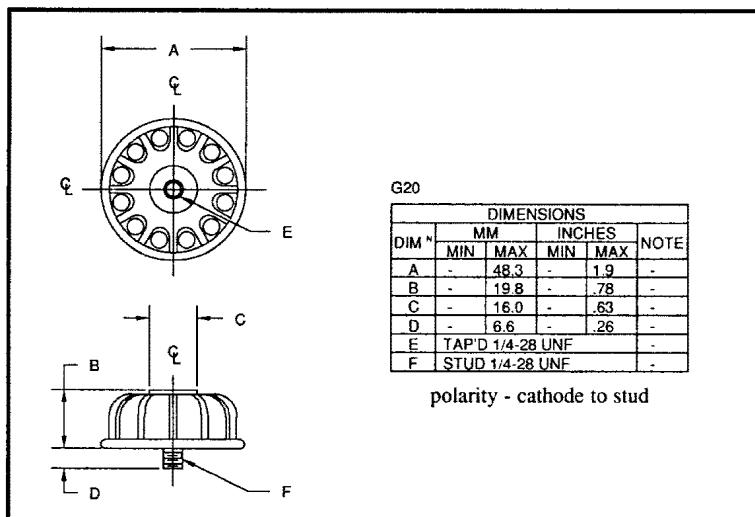
QUICK REFERENCE
DATA

- V_R = 2.5kV - 15kV
- I_F = 350mA
- I_R = 0.25 μ A
- t_{rr} = 350nS

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_F(AV)$				1 Cycle Surge Current I_{FSM} $t_p = 8.3ms$ $@ T_{JMAX}$	Repetitive Surge Current $I_{FRM} @ 25^\circ C$	I^2t $t_p = 8.3ms$
		air 25 $^\circ C$	air 100 $^\circ C$	stud to heat- sink @ 25 $^\circ C$	in still oil @ 55 $^\circ C$			
		Volts	Amps	Amps	Amps			
SHVM2.5F	2500							
SHVM5F	5000							
SHVM7.5F	7500	0.35	0.15	0.35	0.35	15.0	8.0	0.9
SHVM10F	10000							
SHVM12.5F	12500							
SHVM15F	15000							

MECHANICAL



MAXIMUM THERMAL IMPEDANCES

Junction - Ambient $R_{JA} < 12^\circ C/W$
 Junction - Stud $R_{JS} < 6^\circ C/W$
 Junction - Oil $R_{JO} < 4.5^\circ C/W$

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Reverse Recovery Time ¹ $t_{rr} @ 25^\circ C$	Maximum Forward Voltage $V_F @ 0.8A$ $@ 25^\circ C$
	$@ 25^\circ C$	$@ 100^\circ C$		
	μA	μA	nS	Volts
SHVM2.5F	1.0	50	350	7
SHVM5F				14
SHVM7.5F				21
SHVM10F				28
SHVM12.5F				35
SHVM15F				42

1. Measured on discrete devices prior to assembly

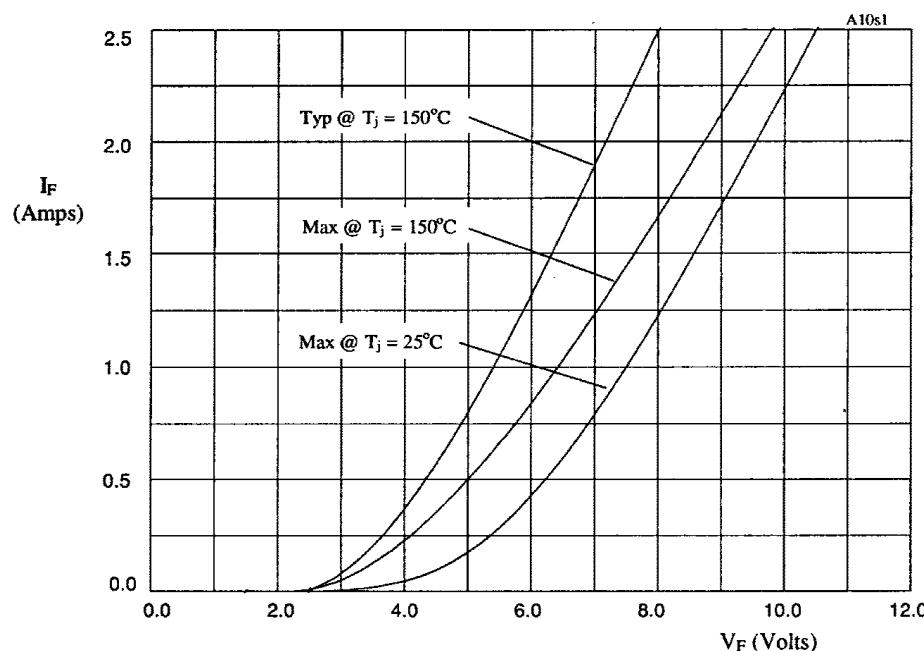
Operating temperature range $-55^\circ C$ to $+150^\circ C$
Storage temperature range $-55^\circ C$ to $+150^\circ C$ 

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

TABLE 1

DEVICE	X-AXIS
SHVM2.5F	x1
SHVM5F	x2
SHVM7.5F	x3
SHVM10F	x4
SHVM12.5F	x5
SHVM15F	x6

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