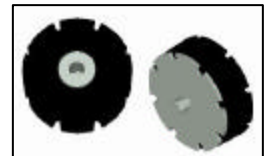


**TECHNICAL DATA**  
**DATA SHEET 544, REV. -**

## HIGH VOLTAGE, HIGH DENSITY, FAST RECOVERY MODULAR RECTIFIER ASSEMBLY

**FEATURES:**

- Low reverse recovery time
  - Low reverse leakage currents
  - High thermal shock resistance
  - Modular construction
  - Low distributed capacitance
- $V_R = 2500V - 7500V$
  - $I_F = 0.8 - 2.4A$
  - $I_{FSM} = \text{up to } 130A$
  - $t_{rr} = 150ns$


**Absolute Maximum Ratings**

TYPE NUMBER	PEAK INVERSE VOLTAGE (PIV)	MAX. AVG. DC OUTPUT CURRENT (AIR) $I_{F(AV)}$		STUD TO HEAT-SINK @ 25°C	IN STILL OIL @ 55°C	1 CYCLE SURGE CURRENT $T I_{FSM}$ $t_p = 8.3ms$ @ $T_{JMAX}$	$f_t$ $t_p = 8.3ms$	REPETITIVE SURGE CURRENT $I_{FRM}$ @ 25°C
		Amps						
		25°C	100°C					
S2HVM2.5F	2500	2.0	0.8	2.0	2.0	32	4.25	11
S2HVM5F	5000	1.2	0.5	2.0	2.0	32	4.25	11
S2HVM7.5F	7500	0.8	0.3	1.5	2.0	32	4.25	11
S3HVM2.5F	2500	2.4	1.0	3.0	3.0	70	20	20
S3HVM5F	5000	1.2	0.5	2.5	3.0	70	20	20
S6HVM2.5F	2500	2.4	1.0	5.0	6.0	130	70	35

**MAXIMUM THERMAL IMPEDANCES**

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

**Electrical Characteristics**

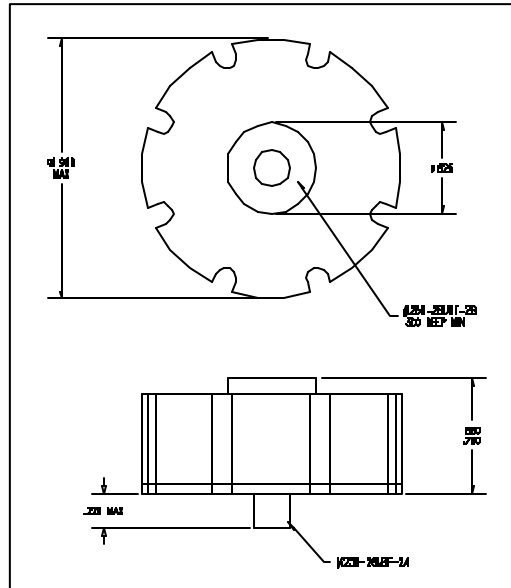
TYPE NUMBER	MAXIMUM REVERSE CURRENT @ PIV		MAXIMUM PEAK FORWARD VOLTAGE $V_F$ @ $I_F$		MAXIMUM REVERSE RECOVERY TIME ① $t_{rr}$ @ 25°C
	$I_R$				
	$\mu\text{Amps}$		V	A	
	25°C	100°C			
S2HVM2.5F	1.0	25.0	6.0	@ 1.0	150
S2HVM5F	1.0	25.0	12	@ 1.0	
S2HVM7.5F	1.0	25.0	18	@ 1.0	
S3HVM2.5F	5.0	25.0	6.0	@ 3.0	
S3HVM5F	5.0	25.0	12	@ 3.0	
S6HVM2.5F	10.0	50.0	6.0	@ 6.0	

**Notes:**

- Operating temperature range  $-55$  to  $+150^\circ C$ .
- Storage temperature range  $-55$  to  $+150^\circ C$ .
- (Temperature range is given for Hermetic Diodes)
- ① Measured on discrete devices prior to assembly.

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**Mechanical Dimensions in: mm / inches**



**CHARACTERISTICS CURVES**

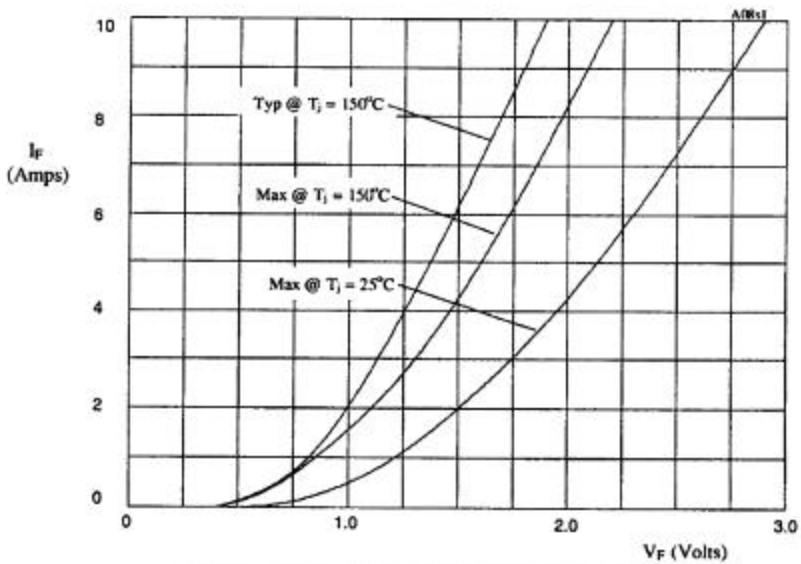


Figure 1. Forward voltage drop as a function of forward current for S2HVM\*\*F series (see Table 1).

TABLE 1

DEVICE	X-AXIS
S2HVM2.5F	x3
S2HVM5F	x6
S2HVM7.5F	x8

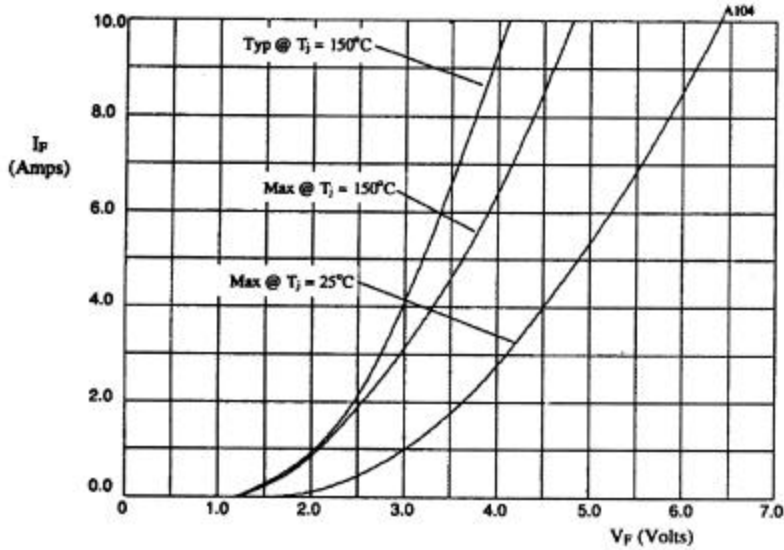


Figure 2. Forward voltage drop as a function of forward current for S3HVM\*\*F series (see Table 2).

TABLE 2

DEVICE	X-AXIS
S3HVM2.5F	x1
S3HVM5F	x2

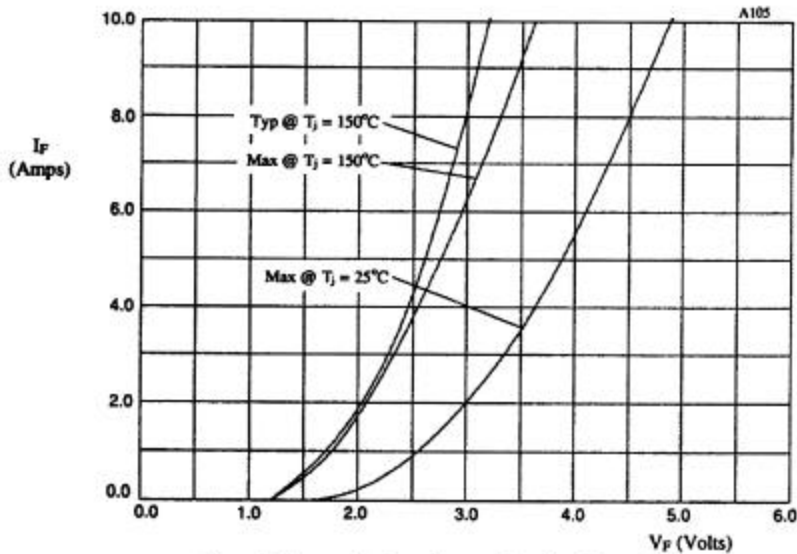


Figure 3. Forward voltage drop as a function of forward current for S6HVM2.5F.

**TECHNICAL DATA**

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