

## High Voltage Diffused Silicon Rectifiers VF Series

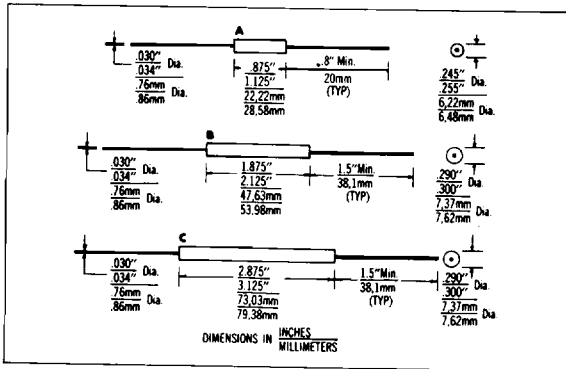
Minimum Size  
5KV to 50KV ( $V_{RRM}$ )  
Diffused Silicon Junction  
Low Leakage Current  
250 Nanosec. Reverse Recovery\*

### STANDARD TYPES

MQSI Part No.	Repetitive Peak Reverse Voltage $V_{RRM}$ (Volts)	Avg. Fwd. Current $I_o$ @ 40°C (mA)	Max. Fwd. Voltage Drop @ 10mA (Volts)	Case Style
VF 5	5,000	130	10	A
VF 7	7,000	115	12	A
VF10	10,000	100	15	A
VF12	12,000	100	18	A
VF15	15,000	90	30	B
VF20	20,000	90	32	B
VF25	25,000	85	35	B
VF30	30,000	80	45	C
VF40	40,000	45	75	C
VF50	50,000	40	80	C

### FAST RECOVERY TYPES

MQSI Part No.	Repetitive Peak Reverse Voltage $V_{RRM}$ (Volts)	Avg. Fwd. Current $I_o$ @ 40°C (mA)	Max. Fwd. Voltage Drop @ 10mA (Volts)	Case Style
VF 5X	5,000	60	12	A
VF 7X	7,000	45	16	A
VF10X	10,000	40	18	A
VF12X	12,000	35	22	A
VF15X	15,000	30	34	B
VF20X	20,000	25	40	B
VF25X	25,000	25	44	B
VF30X	30,000	25	48	C
VF40X	40,000	25	75	C
VF50X	50,000	25	90	C



### ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

CHARACTERISTICS	
Max. DC Reverse Current @ rated $V_{RRM}$ and $25^\circ\text{C}$ , $I_R$ (Fig. 1)	1 $\mu\text{A}$
Max. DC Reverse Current @ rated $V_{RRM}$ and $100^\circ\text{C}$ , $I_R$ (Fig. 1)	10 $\mu\text{A}$
Max. Reverse Recovery Time, @ $I_R = 2\text{mA}$ and $I_F = -4\text{mA}$ , Recovery to $-1.0\text{mA}$ (FIG. 3), $t_r$	250 nsec*
Ambient Operating Temperature Range, $T_A$	$-55^\circ\text{C}$ to $+150^\circ\text{C}$ $-55^\circ\text{C}$ to $+100^\circ\text{C}$ *
Storage Temperature Range $T_{STG}$	$-50^\circ\text{C}$ to $+150^\circ\text{C}$
Max. One-Half Cycle Surge Current @ 60Hz, $I_{FSM}$	3 A

\*Fast Recovery Series

### NOTES:

- Suffix (X) denotes Fast Recovery Series.
- Maximum lead and terminal temperature for soldering,  $\frac{3}{8}$  inch from case, 5 seconds at  $250^\circ\text{C}$ .
- If operated over 10,000 V/inch in length, devices should be immersed in oil or re-encapsulated.

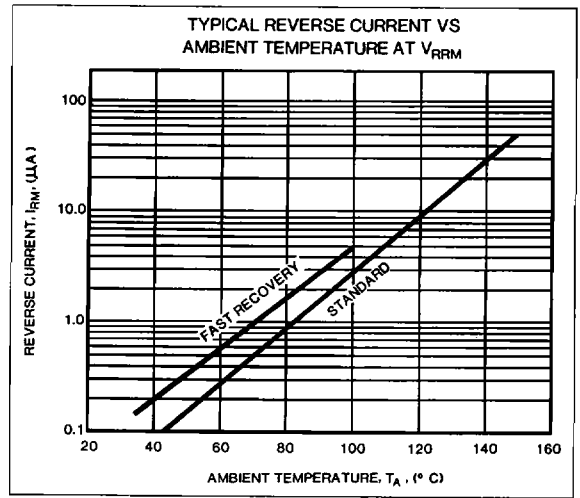
**SERIES VF**

The series VF high voltage and high voltage fast recovery time diffused silicon rectifiers are designed for industrial and commercial applications that require high reliability at an economical cost.

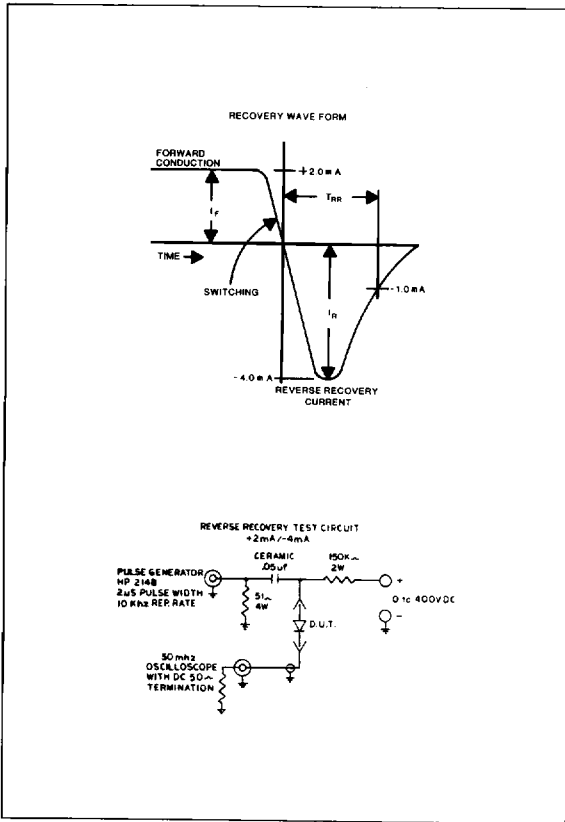
This series offers high voltage ranges in minimum-sized, epoxy-encapsulated packages with low leakage current. All ratings are obtained without the use of special heat sinks or mounting techniques. (See Note 3)

These rectifiers can withstand 500 G shock and vibration of 100 cps with a peak acceleration of 10 G.

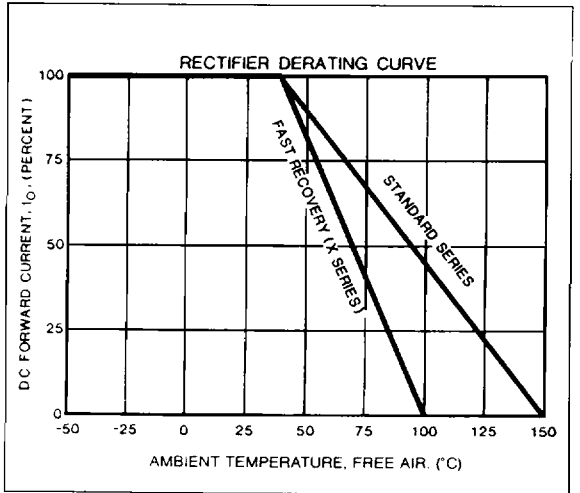
These rectifiers are technically and economically suitable for use in television receivers, electrostatic power supplies, electrostatic copiers, electrostatic air filters and precipitators, and cathode ray tube power supplies.



**FIGURE 1**



**FIGURE 3**



**FIGURE 2**