

# New Jersey Semi-Conductor Products, Inc.

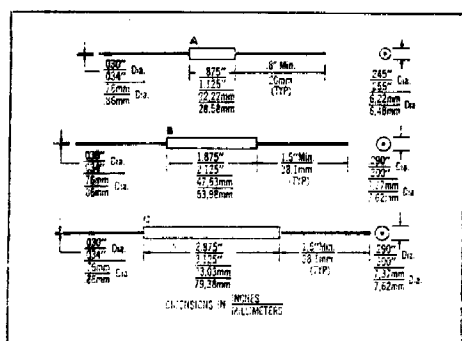
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## VF5 – VF50 VF5X – VF50X

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

VARO Type No.	Repetitive Peak Reverse Voltage $V_{RRM}$ (Volts)	Avg. Fwd. Current $I_o$ @ 40°C (mA)	Max. Fwd. Voltage Drop @ 10mA (Volts)	Case Style	VARO Type 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 5X	5,000	60	12	A
VF 7	7,000	115	12	A	VF 7X	7,000	45	16	A
VF10	10,000	100	15	A	VF10X	10,000	40	18	A
VF12	12,000	100	18	A	VF12X	12,000	35	22	A
VF15	15,000	90	30	B	VF15X	15,000	30	34	B
VF20	20,000 ✓	90	32	B	VF20X	20,000	25	40	B
VF25	25,000	85	35	B	VF25X	25,000	25	44	B
VF30	30,000	80	45	C	VF30X	30,000	25	48	C
VF40	40,000	45	75	C	VF40X	40,000	25	75	C
VF50	50,000	40	80	C	VF50X	50,000	25	90	C

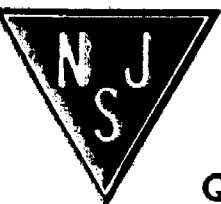


ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise specified)	
Max. DC Reverse Current @ rated $V_{RRM}$ and $25^\circ\text{C}$ , $I_{RM}$	1 $\mu\text{A}$
Max. DC Reverse Current @ rated $V_{RRM}$ and $100^\circ\text{C}$ , $I_{RM}$	10 $\mu\text{A}$
Max. Reverse Recovery Time, @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

\*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.



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**Quality Semi-Conductors**