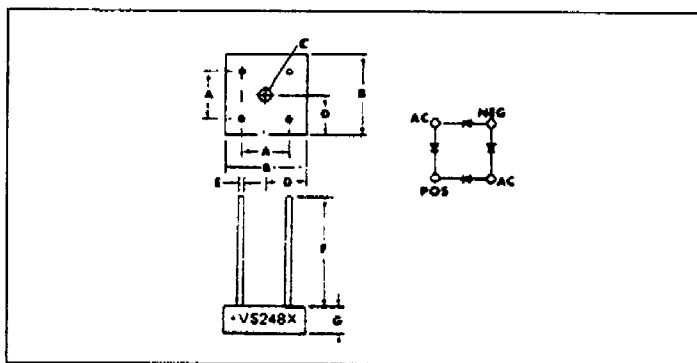


## VS048X – VS1048X

### 2 Amp Fast Recovery Time Epoxy Bridge Rectifiers

200 Nanosecond Maximum Reverse Recovery  
50V, 100V, 200V, 400V, 600V, 800V, and 1000V  $V_{RRM}$  Ratings  
35 Amps Peak One Half Cycle Surge Current  
Glass passivated silicon chips

LTR.	INCHES	MILLIMETERS
A	.411-.441	10.44-11.20
B	.590- .610	14.99-15.49
C	.137-.167 Dia.	3.48-4.24 Dia.
D	.295-.305	7.49-7.75
E	.037-.043 Dia.	.94-1.09 Dia.
F	1.0 Min.	25.4 Min.
G	.195-.205	4.95-5.21



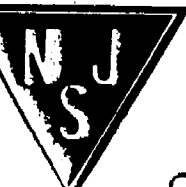
#### MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	VS048X	VS148X	VS248X	VS448X	VS648X	VS848X	VS1048X	UNITS
DC Blocking Voltage, Working Peak Reverse Voltage, Peak Repetitive Reverse Voltage,	$V_{RRM}$ $V_{RRM}$ $V_{RRM}$	50	100	200	400	600	800	1000	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	Volts
Peak Surge Current, 1/2 Cycle at 60 Hz, (Non-Rep) and $T_A = 45^\circ\text{C}$ (Fig.2)	$I_{FSM}$	35							Amps
Peak Surge Current, 1 sec at 60 Hz and $T_A = 45^\circ\text{C}$ (Fig. 1)	$I_{FRM}$	6							Amps
Avg. Forward Current at $T_C = 40^\circ\text{C}$ , (Fig. 1)	$I_O$	2							Amps
Junction Operating and Storage Temperature Range	$T_J, T_{STG}$	- 50 to + 135							$^\circ\text{C}$
Maximum Soldering Temperature & Time		10 Sec. at $265^\circ\text{C}$							

#### ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL			UNITS
Maximum Instantaneous Forward Voltage Drop (per diode) at 2 Amps (Fig. 3)	$V_{FM}$	1.5	1.6	Volts/ Leg
Maximum Reverse Recovery Time $I_F = 1$ Amp, $I_R = 2$ Amps, $I_{RR} = 0.5$ Amp	$t_r$	200		nsec
Maximum Reverse Current at Rated $V_{RM}$	$I_{RM}$	10		$\mu\text{A}$
Maximum Reverse Current at Rated $V_{RM}$ at $T_A = 125^\circ\text{C}$	$I_{RM}$	4		mA
Insulation Strength Circuit to Case (Min.)		2000		Vdc
Thermal Resistance (Typ.) Junction to Case (on Heat Sink)	$R_{\theta JC}$	8		$^\circ\text{C}/\text{W}$
Junction to Air (No Heat Sink)	$R_{\theta JA}$	25		$^\circ\text{C}/\text{W}$

Part Nos. VS048X, VS148X, VS248X, VS448X and VS648X have been recognized under the Component Program of Underwriters Laboratories, Inc.



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

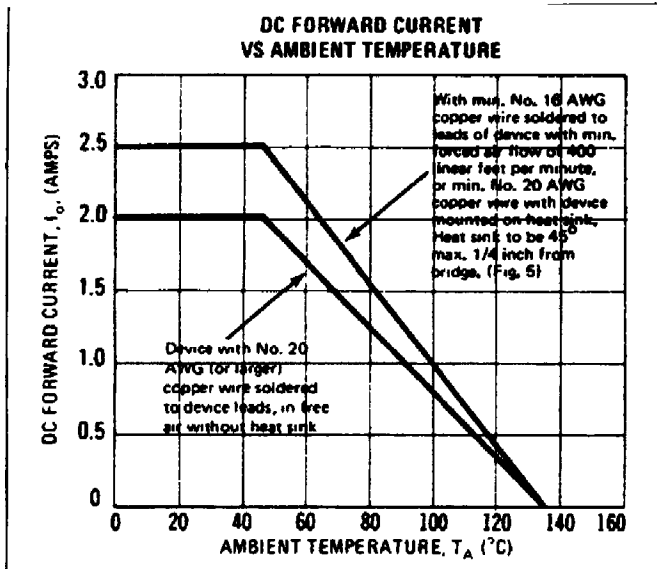


FIGURE 1

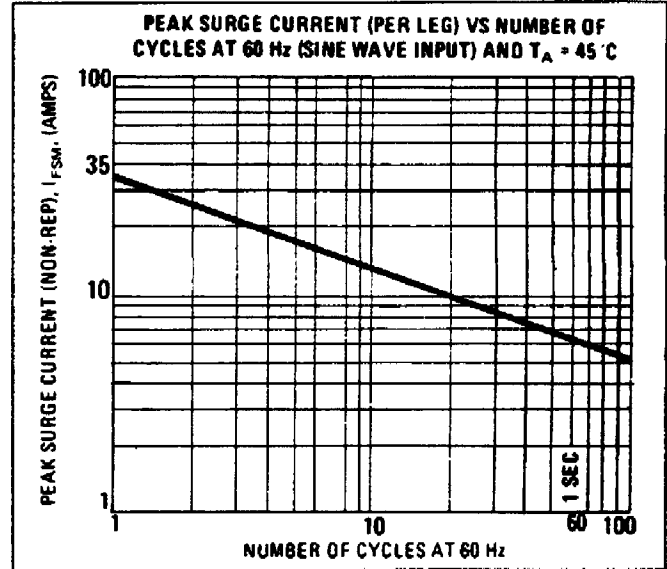


FIGURE 2

T-23-05

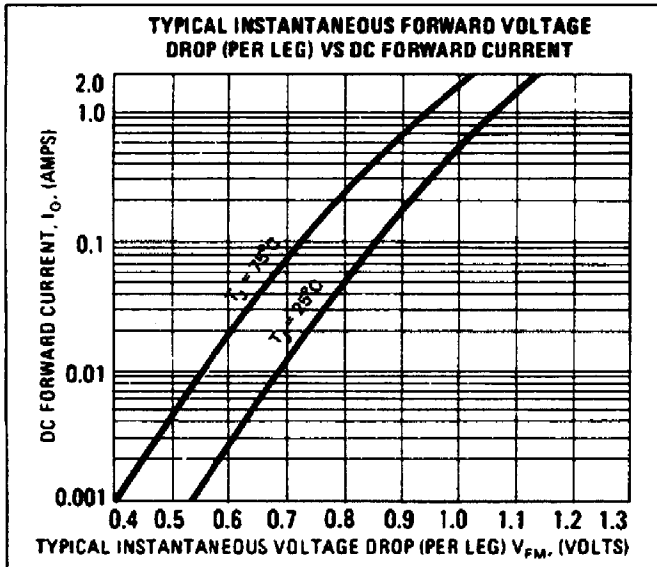


FIGURE 3

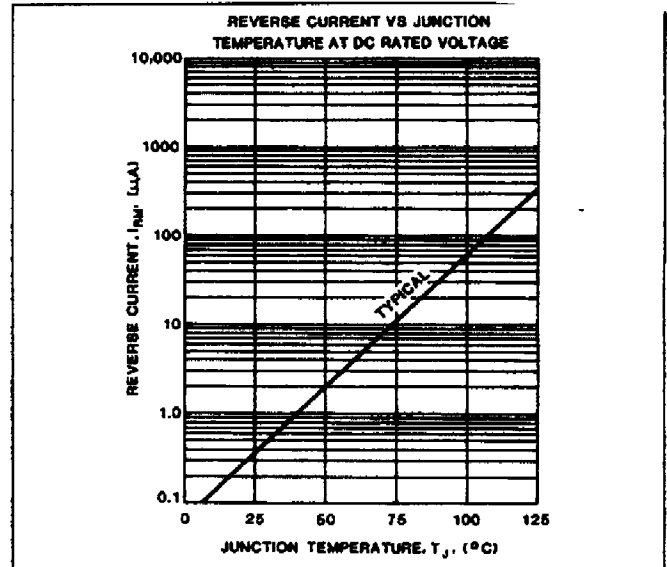


FIGURE 4

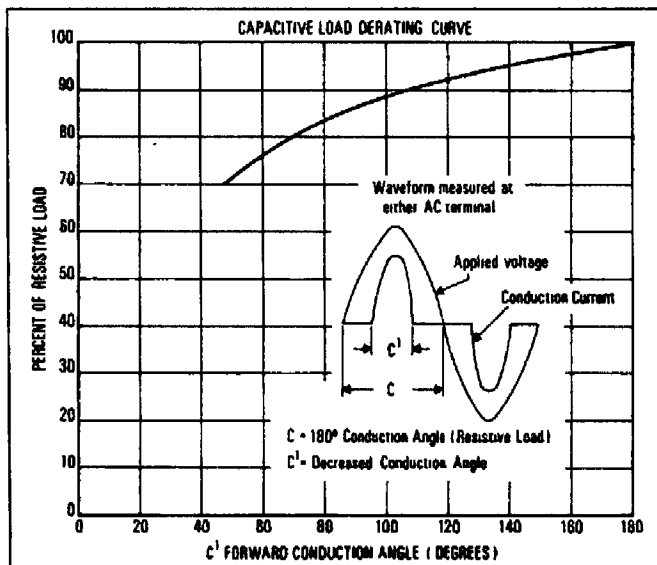


FIGURE 5

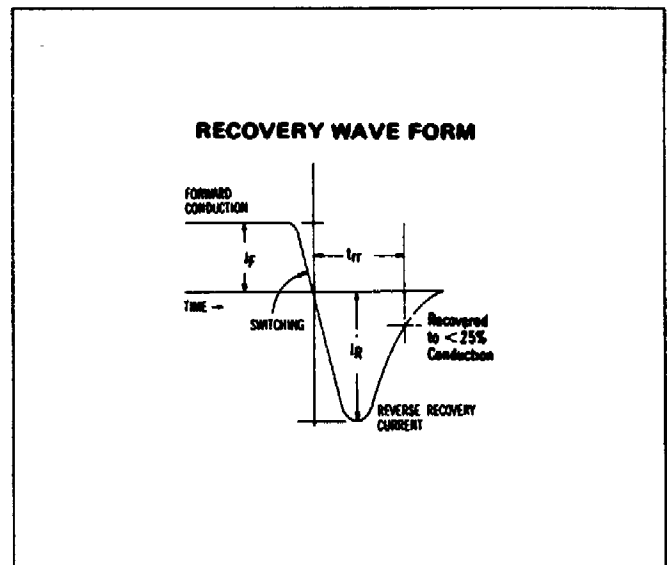


FIGURE 6