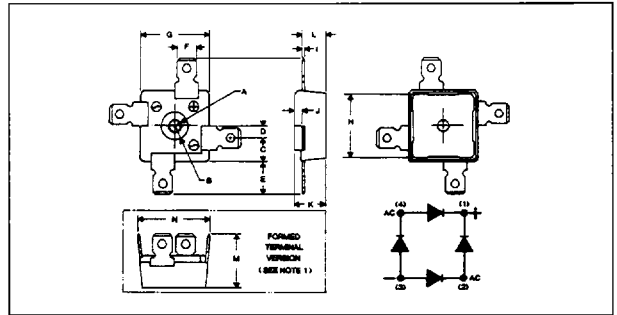


## 30 Amp Epoxy Bridge Rectifiers      VK Series

30 Amps DC Forward Current at  $T_C = 80^\circ\text{C}$   
 300 Amps Peak One Half Cycle Surge Current  
 Externally Exposed Copper Mounting Pad  
 For Low Thermal Resistance  
 2200 Volts Minimum Circuit-to-Case Insulation

LTR.	INCHES	MILLIMETERS
A	.162–.168 Dia.	4.11–4.27 Dia.
B	.345–.355 Dia.	8.76–9.02 Dia.
C	.23–.27 Typ.	5.84–6.86 Typ.
D	.138–.158 Typ.	3.15–4.01 Typ.
E	.38–.42 Typ.	9.65–10.67 Typ.
F	.245–.255 Typ.	6.22–6.48 Typ.
G	.85–.89 Sq.	21.59–22.61 Sq.
H	.76–.78 Sq.	19.30–19.82 Sq.
I	.030–.034 Typ.	.76–.86 Typ.
J	.09–.11	2.29–2.79 Typ.
K	.38–.42	9.65–10.67
L	.29–.30	7.37–7.62
M	.75 Max.	19.05 Max.
N	.89–1.04 Typ.	22.61–26.42 Typ.



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

RATINGS	SYMBOL	CONTROLLED AVALANCHE					NON-CONTROLLED AVALANCHE					UNITS
		VK247	VK447	VK647	VK048	VK148	VK248	VK448	VK648	VK848	VK1048	
Series Number		VK247	VK447	VK647	VK048	VK148	VK248	VK448	VK648	VK848	VK1048	
DC Blocking Voltage	$V_R$	200	400	600	50	100	200	400	600	800	1000	Volts
Working Peak Reverse Voltage	$V_{RWM}$											
Peak Repetitive Reverse Voltage	$V_{RRM}$											
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	35	70	140	280	420	560	700	Volts
Power Dissipation in $V_{(BR)}$ Region for 100 $\mu$ sec Square Wave	$P_{RM}$		1500					NA				Watts
Continuous Power Dissipation in $V_{(BR)}$ Region at $T_C = 40^\circ\text{C}$	$P_R$		4					NA				Watts
Peak Surge Current, 1/2 Cycle at 60 Hz, (Non-Rep) and $T_C = 80^\circ\text{C}$ (Fig. 2)	$I_{FSM}$					300						Amps
Peak Surge Current, 1 sec at 60 Hz and $T_C = 80^\circ\text{C}$ (Fig. 2)	$I_{FRM}$					75						Amps
Avg. Forward Current at $T_C = 80^\circ\text{C}$ (Fig. 1)	$I_O$					30						Amps
Avg. Forward Current at $T_A = 40^\circ\text{C}$ (No Heat Sink)	$I_O$					5						Amps
Junction Operating and Storage Temperature Range	$T_J, T_{STG}$					- 50 to + 150						$^\circ\text{C}$
Fusing Data	$I^2t$					375						Amp <sup>2</sup> - Sec

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

CHARACTERISTICS	SYMBOL	CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE						UNITS	
		VK247	VK447	VK647	VK048	VK148	VK248	VK448	VK648	VK848		VK1048
Series Number		VK247	VK447	VK647	VK048	VK148	VK248	VK448	VK648	VK848	VK1048	
Minimum Avalanche Voltage	$V_{(BR)}$	250	450	650				NA				Volts
Maximum Avalanche Voltage	$V_{(BR)}$	700	900	1100				NA				Volts
Maximum Instantaneous Forward Voltage Drop (per diode) at 30 Amps (Fig. 3)	$V_{FM}$						1.4					Volts/ Leg
Maximum Reverse Current at Rated $V_{RM}$ at $T_J = 40^\circ\text{C}$ , (Fig. 4)	$I_{RM}$						10					$\mu\text{A}$
Maximum Reverse Current at Rated $V_{RM}$ at $T_J = 150^\circ\text{C}$ , (Fig. 4)	$I_{RM}$						1.0					mA
Insulation Strength From Circuit to Case (min.)							2200					Volts DC
Maximum Thermal Resistance, Junction to Case	$R_{th(j-c)}$						1.0					$^\circ\text{C}/\text{W}$

Recognized Under Components Program of Underwriters Laboratories, Inc.

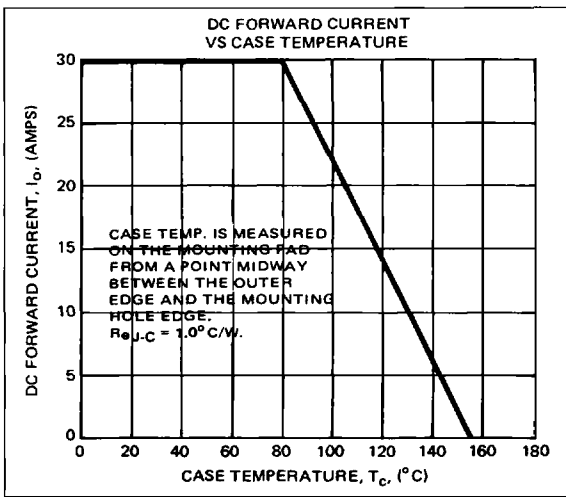


FIGURE 1

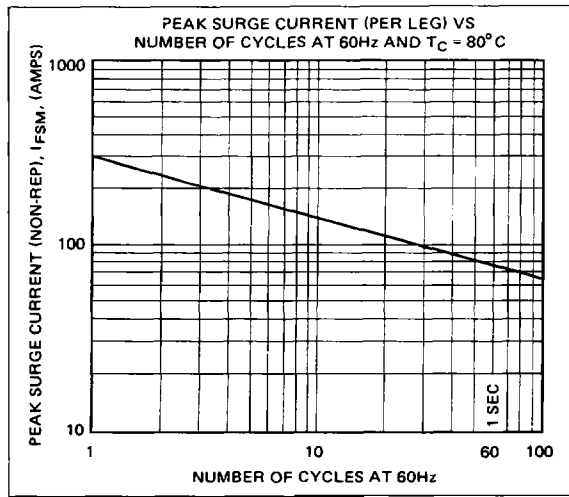


FIGURE 2

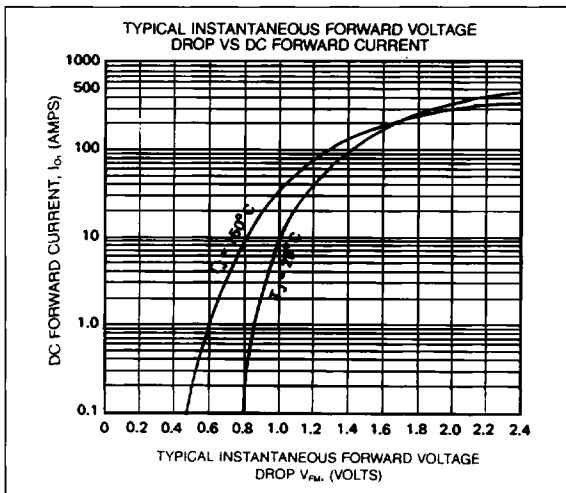


FIGURE 3

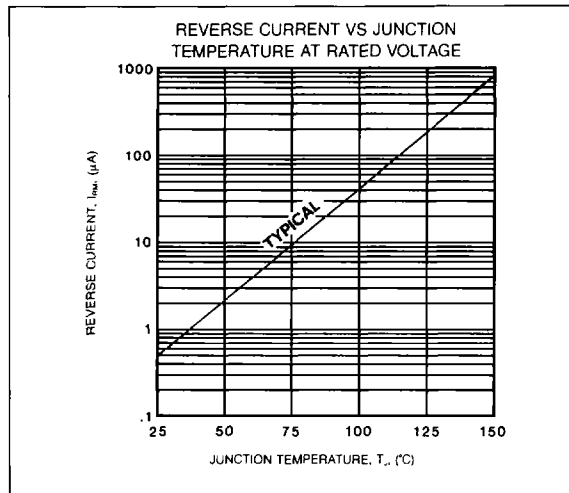


FIGURE 4

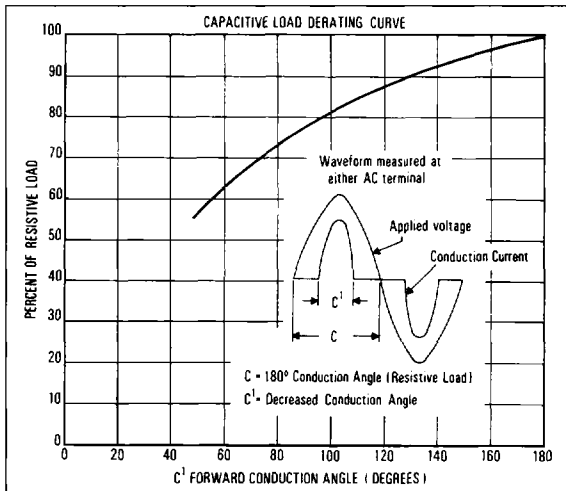


FIGURE 5

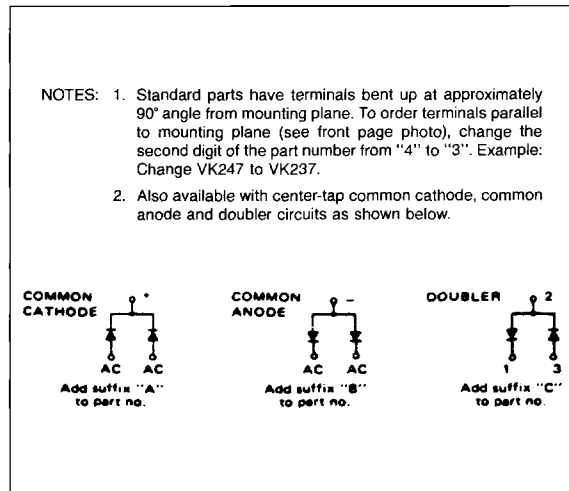


FIGURE 6