VARO

VARO SEMICONDUCTOR, INC.

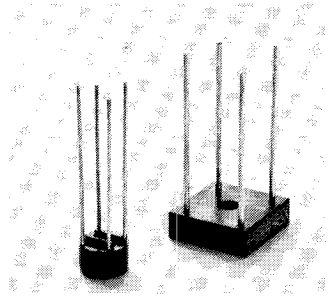
P.O. BOX 676, 1000 N. SHILOH, GARLAND, TEX. 75040 (214) 272-4551 TWX 910-860-5178

EBR EPOXY BRIDGE RECTIFIERS

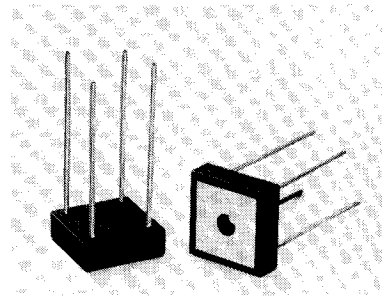
- **Controlled Avalanche series has 250V, 450V, 650V and 850V minimum avalanche voltages (V_{BR})**
- **Non-controlled Avalanche series with 50V, 100V, 200V, 400V, 600V and 800V (V_{RRM})**
- **Fast recovery series with 200 nanosec. reverse recovery (t_{rr}).**

The EBR bridge rectifiers combine economical cost, high reliability and circuit-to-case electrical isolation. They are available in a wide range of current and voltage ratings.

1 AMP 2 & 6 AMP



10 AMP



MAXIMUM RATINGS @ $T_A = 25°C$ (UNLESS OTHERWISE SPECIFIED)

Varo Part Number	Peak Rep. Reverse Voltage (V_{RRM}) (Volts)	RMS Reverse Voltage ($V_{R(RMS)}$) (Volts)	Power Dissipation (100 μsec sq. wave) (P_{RM}) (Watts)	Peak Surge Current (½ cycle @ 60 Hz, Non-Rep) (I_{FSM}) (Amps)	DC Forward Current (I_O) (Amps)	Junction Operating Stg. Temp. Range (T_J, T_{STG}) (°C)
1 AMP CONTROLLED AVALANCHE						
VE27	200	140	200	25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE47	400	280	200	25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE67	600	420	200	25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE87	800	560	200	25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
1 AMP NON-CONTROLLED AVALANCHE						
W110	25	17		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE08	50	35		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE18	100	70		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE28	200	140	NA	25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE48	400	280		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE68	600	420		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
VE88	800	560		25 @ T_A = 65°C	1 @ T_A = 65°C	−50 to +150
1 AMP FAST RECOVERY						
VE08X	50	35		17 @ T_A = 40°C	1 @ T_A = 40°C	−50 to +125
VE18X	100	70		17 @ T_A = 40°C	1 @ T_A = 40°C	−50 to +125
VE28X	200	140	NA	17 @ T_A = 40°C	1 @ T_A = 40°C	−50 to +125
VE48X	400	280		17 @ T_A = 40°C	1 @ T_A = 40°C	−50 to +125
VE68X	600	560		17 @ T_A = 40°C	1 @ T_A = 40°C	−50 to +125
2 AMP CONTROLLED AVALANCHE						
VS247	200	140	300	50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS447	400	280	300	50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS647	600	420	300	50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS847	800	560	300	50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
2 AMP NON-CONTROLLED AVALANCHE						
VS048	50	35		50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS148	100	70		50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS248	200	140	NA	50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS448	400	280		50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS648	600	420		50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
VS848	800	560		50 @ T_A = 60°C	2 @ T_A = 60°C	−50 to +150
2 AMP FAST RECOVERY						
VS048X	50	35		35 @ T_A = 45°C	2 @ T_A = 45°C	−50 to +135
VS148X	100	70		35 @ T_A = 45°C	2 @ T_A = 45°C	−50 to +135
VS248X	200	140	NA	35 @ T_A = 45°C	2 @ T_A = 45°C	−50 to +135
VS448X	400	280		35 @ T_A = 45°C	2 @ T_A = 45°C	−50 to +135
VS648X	600	420		35 @ T_A = 45°C	2 @ T_A = 45°C	−50 to +135
6 AMP CONTROLLED AVALANCHE (See Note 1)						
VH247	200	140	400	100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH447	400	280	400	100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH647	600	420	400	100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH847	800	560	400	100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
6 AMP NON-CONTROLLED AVALANCHE (See Note 1)						
VH048	50	35		100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH148	100	70		100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH248	200	140	NA	100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH448	400	280		100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH648	600	420		100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
VH848	800	560		100 @ T_{HS} = 80°C	6 @ T_{HS} = 80°C	−50 to +150
5 AMP FAST RECOVERY (See Note 1)						
VH048X	50	35		65 @ T_{HS} = 60°C	5 @ T_{HS} = 60°C	−50 to +135
VH148X	100	70		65 @ T_{HS} = 60°C	5 @ T_{HS} = 60°C	−50 to +135
VH248X	200	140	NA	65 @ T_{HS} = 60°C	5 @ T_{HS} = 60°C	−50 to +135
VH448X	400	280		65 @ T_{HS} = 60°C	5 @ T_{HS} = 60°C	−50 to +135
VH648X	600	560		65 @ T_{HS} = 60°C	5 @ T_{HS} = 60°C	−50 to +135
10 AMP CONTROLLED AVALANCHE						
VJ247	200	140	400	100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ447	400	280	400	100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ647	600	420	400	100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ847	800	560	400	100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
10 AMP NON-CONTROLLED AVALANCHE						
VJ048	50	35		100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ148	100	70		100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ248	200	140	NA	100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ448	400	280		100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ648	600	420		100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ848	800	560		100 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
10 AMP FAST RECOVERY						
VJ048X	50	35		75 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ148X	100	70		75 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ248X	200	140	NA	75 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ448X	400	280		75 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150
VJ648X	600	420		75 @ T_C = 60°C	10 @ T_C = 60°C	−50 to +150

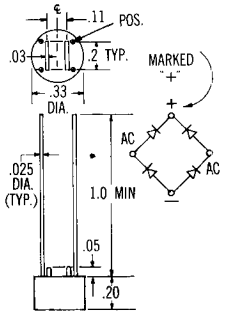
NOTE 1: Mount to heat sink as shown on next page for full rated I_O.

VARO

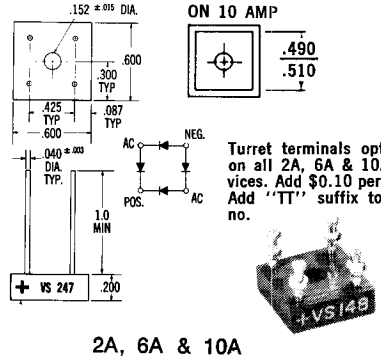
VARO SEMICONDUCTOR, INC.

P.O. BOX 676, 1000 N. SHILOH, GARLAND, TEX. 75040 (214) 272-4551 TWX 910-860-5178

EBR EPOXY BRIDGE RECTIFIERS

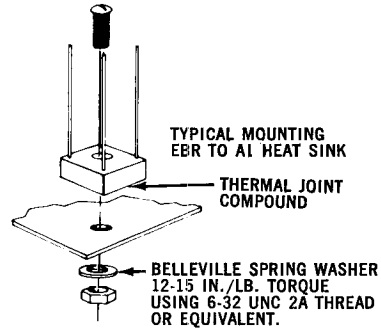


1 AMP



Turret terminals optional on all 2A, 6A & 10A devices. Add $0.10 per unit. Add "TT" suffix to part no.

2A, 6A & 10A



HEAT SINK MOUNTING

ELECTRICAL CHARACTERISTICS @ $T_A = 25°C$ (UNLESS OTHERWISE SPECIFIED)

Varo Part Number	Avalanche Voltage (V_{BR}) Min. Volts	Max. Volts	Max. Inst. Forward Voltage Drop @ Io (V_{FM}) (Volts/Leg)	Max. Reverse Current @ Rated V_{RRM} (I_{RM}) (T_A = 25°C) (μA/Leg)	(T_A = 150°C) (mA/Leg)	Max. Reverse Recovery Time (t_{rr}) (Nanosec.)	Write For Data Sheet Number	Pricing 1-99	100-999
1 AMP CONTROLLED AVALANCHE									
VE27	250	700	1.2	5	0.1	NA	DLS-028	$1.20	$1.10
VE47	450	900	1.2	5	0.1		DLS-028	1.30	1.20
VE67	650	1100	1.2	5	0.1		DLS-028	1.59	1.45
VE87	850	1300	1.2	5	0.1		DLS-028	1.79	1.60
1 AMP NON-CONTROLLED AVALANCHE									
W110	NA	NA	1.2	5	0.1	NA	DLS-028	.90	.81
VE08			1.2	5	0.1		DLS-028	.95	.85
VE18			1.2	5	0.1		DLS-028	1.00	.90
VE28			1.2	5	0.1		DLS-028	1.10	1.00
VE48			1.2	5	0.1		DLS-028	1.20	1.10
VE68			1.2	5	0.1		DLS-028	1.49	1.35
VE88			1.2	5	0.1		DLS-028	1.64	1.48
1 AMP FAST RECOVERY (See Note 2)									
VE08X	NA	NA	1.5	10	2.0	200	DLS-043	1.34	1.21
VE18X			1.5	10	2.0	200	DLS-043	1.49	1.35
VE28X			1.5	10	2.0	200	DLS-043	1.65	1.50
VE48X			1.5	10	2.0	200	DLS-043	1.80	1.65
VE68X			1.5	10	2.0	200	DLS-043	1.98	1.82
2 AMP CONTROLLED AVALANCHE									
VS247	250	700	1.2	5	0.1	NA	DLS-021	1.20	1.10
VS447	450	900	1.2	5	0.1		DLS-021	1.30	1.20
VS647	650	1100	1.2	5	0.1		DLS-021	1.60	1.50
VS847	850	1300	1.2	5	0.1		DLS-021	1.86	1.65
2 AMP NON-CONTROLLED AVALANCHE									
VS048	NA	NA	1.2	5	0.1	NA	DLS-021	.95	.85
VS148			1.2	5	0.1		DLS-021	1.00	.90
VS248			1.2	5	0.1		DLS-021	1.10	1.00
VS448			1.2	5	0.1		DLS-021	1.20	1.10
VS648			1.2	5	0.1		DLS-021	1.50	1.40
VS848			1.2	5	0.1		DLS-021	1.65	1.54
2 AMP FAST RECOVERY (See Note 2)									
VS048X	NA	NA	1.5	10	4.0	200	DLS-044	1.48	1.35
VS148X			1.5	10	4.0	200	DLS-044	1.65	1.50
VS248X			1.5	10	4.0	200	DLS-044	1.81	1.65
VS448X			1.5	10	4.0	200	DLS-044	1.98	1.81
VS648X			1.5	10	4.0	200	DLS-044	2.21	1.99
6 AMP CONTROLLED AVALANCHE									
VH247	250	700	1.3	5	0.1	NA	DLS-029	2.25	1.85
VH447	450	900	1.3	5	0.1		DLS-029	2.59	2.13
VH647	650	1100	1.3	5	0.1		DLS-029	2.98	2.45
VH847	850	1300	1.3	5	0.1		DLS-029	3.36	2.75
6 AMP NON-CONTROLLED AVALANCHE									
VH048	NA	NA	1.3	5	0.1	NA	DLS-029	1.73	1.43
VH148			1.3	5	0.1		DLS-029	1.93	1.58
VH248			1.3	5	0.1		DLS-029	2.15	1.75
VH448			1.3	5	0.1		DLS-029	2.49	2.03
VH648			1.3	5	0.1		DLS-029	2.88	2.35
VH848			1.3	5	0.1		DLS-029	3.08	2.50
5 AMP FAST RECOVERY (See Note 2)									
VH048X	NA	NA	1.4	10	4.0	200	DLS-040	2.16	1.78
VH148X			1.4	10	4.0	200	DLS-040	2.40	1.98
VH248X			1.4	10	4.0	200	DLS-040	2.69	2.20
VH448X			1.4	10	4.0	200	DLS-040	2.96	2.46
VH648X			1.4	10	4.0	200	DLS-040	3.26	2.71
10 AMP CONTROLLED AVALANCHE									
VJ247	250	700	1.3	5	0.1	NA	DLS-042	2.46	2.02
VJ447	450	900	1.3	5	0.1		DLS-042	2.84	2.33
VJ647	650	1100	1.3	5	0.1		DLS-042	3.28	2.53
VJ847	850	1300	1.3	5	0.1		DLS-042	3.58	2.80
10 AMP NON-CONTROLLED AVALANCHE									
VJ048	NA	NA	1.3	5	0.1	NA	DLS-042	1.93	1.58
VJ148			1.3	5	0.1		DLS-042	2.12	1.74
VJ248			1.3	5	0.1		DLS-042	2.36	1.92
VJ448			1.3	5	0.1		DLS-042	2.74	2.23
VJ648			1.3	5	0.1		DLS-042	3.18	2.43
VJ848			1.3	5	0.1		DLS-042	3.38	2.63
10 AMP FAST RECOVERY (See Note 2)									
VJ048X	NA	NA	1.5	10	2.0	200	DLS-046	2.37	1.96
VJ148X			1.5	10	2.0	200	DLS-046	2.64	2.18
VJ248X			1.5	10	2.0	200	DLS-046	2.96	2.42
VJ448X			1.5	10	2.0	200	DLS-046	3.26	2.71
VJ648X			1.5	10	2.0	200	DLS-046	3.59	2.96

NOTE 2: t_{rr} measured at I_F = 1 Amp, I_R = 2 Amps, Recovery to $I_{R(REC)}$ = .2 Amps.