



VARO SEMICONDUCTOR, INC., P.O. BOX 40676
1000 NORTH SHILOH, GARLAND, TEXAS 75040
(214) 271-8511 TWX 910-860-5178

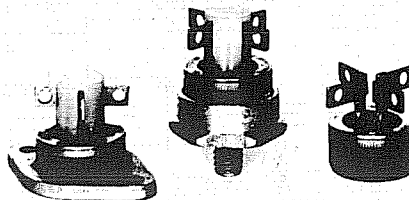
DLS 025

IBR[®] 25 Amp Silicon Avalanche Integrated Rectifiers

VT Series

June 1981

140V, 280V, and 420V RMS Operation
250V, 450V, and 650V Minimum Avalanche Voltages
25 Amp DC Output Current at $T_c = 100^\circ\text{C}$
250 Amp One/Cycle Surge Current
2000V Min. Circuit-To-Case Insulation

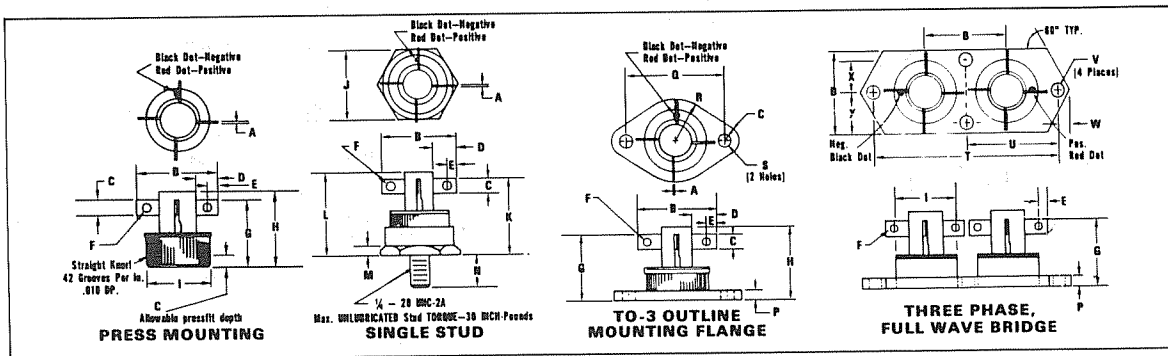


MAXIMUM RATINGS ⁽¹⁾ (60 Hz Resistive and Inductive Load)	SYMBOL	200V	400V	600V	UNIT	CIRCUIT ⁽²⁾
DC Blocking Voltage	V_{RM}	200	400	600	Volt	ALL
Working Peak Reverse Voltage	V_{RWM}					
Peak Repetitive Reverse Voltage	V_{RRM}					
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	Volt	ALL
Avg. Forward Current at $T_c = 100^\circ\text{C}$ (Fig. 2)	I_o	(Circuit Output) 25			Amp	ALL
Peak Surge Current, $\frac{1}{2}$ Cycle @ 60 Hz (Non-Rep) at $T_c = 100^\circ\text{C}$ (Fig. 3)	I_{FSM}	250			Amp/ Leg	ALL
Peak Surge Current, 1 sec at 60 Hz and $T_c = 100^\circ\text{C}$ (Non-Rep)	$I_{F(RMS)}$	53			Amp/ Leg	ALL
Power Dissipation in V_{RRM} Region for 100 $\mu\text{sec.}$, Square Wave (Fig. 4)	P_{RM}	1500			Watt	ALL
Continuous Power Dissipation in V_{RRM} Region at $T_c = 50^\circ\text{C}$	P_R	4			Watt/ Leg	ALL
Junction Operating and Storage Temp. Range	$T_J, T_{stg.}$	- 65 to + 150			$^\circ\text{C}$	ALL

ELECTRICAL CHARACTERISTICS (At $T_c = 25^\circ\text{C}$ unless otherwise specified)	SYMBOL	200V	400V	600V	UNIT	CIRCUIT ⁽²⁾
Minimum Avalanche Voltage	V_{BR}	250	450	650	Volt	ALL
Maximum Avalanche Voltage	V_{BRM}	700	900	1100	Volt	ALL
Max. Instantaneous Forward Voltage Drop at 25 Amps	V_{FM}	1.5			Volt/ Leg	ALL
Max. Reverse Current at Rated V_{RRM} and $T_c = 150^\circ\text{C}$	I_{RM}	5			mA/ Leg	ALL
Max. Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1 ⁽³⁾			$^\circ\text{C/W}$	VT YTH
Insulation Strength, Circuit-to-Case		2000 (Min.)			VDC	ALL

Notes:

- Case Temperature (T_c) is measured on bottom of case within 0.125" (3.18mm) of center of case.
- See Reverse Side for Part Number and Circuit Selection Guide.
- For Full Wave Bridge, Single and Three-Phase.



Ltr	Inches	Millimeters	Ltr	Inches	Millimeters	Ltr	Inches	Millimeters	Ltr	Inches	Millimeters
A	.032 Typ.	.81	G	.830 Max.	21.08	M	.120	3.05	T	2.250	57.15
B	1.0 Max.	25.4	H	.930 Max.	23.62	N	.34-40	8.64-10.16	U	1.125	28.58
C	.187 Typ.	4.75	I	.7505-.7545	19.06-19.16	P	.135 Max.	3.43	V	.156 Dia.	3.96
D	.25 Min.	6.35	J	.875	22.23	Q	1.177-1.197	29.90-30.40	W	.164	4.17
E	.125 Typ.	3.18	K	1.10 Max.	27.94	R	.525R Max.	13.34	X	.375	9.53
F	.110 Dia.	2.79	L	1.20 Max.	30.48	S	.151-.161 Dia.	3.84-4.09	Y	.50	12.70

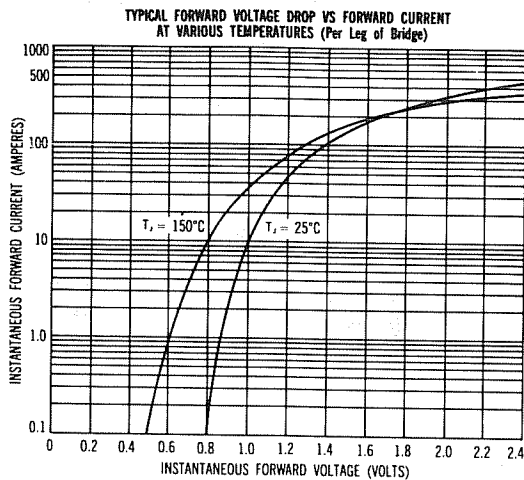


FIG. 1

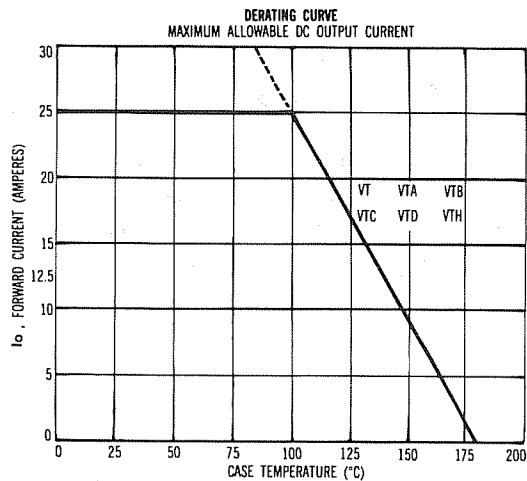


FIG. 2

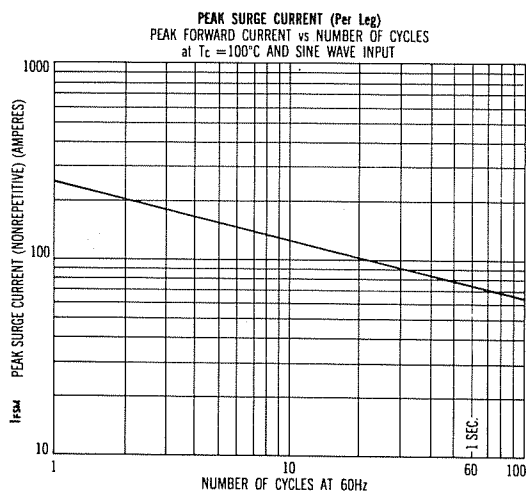


FIG. 3

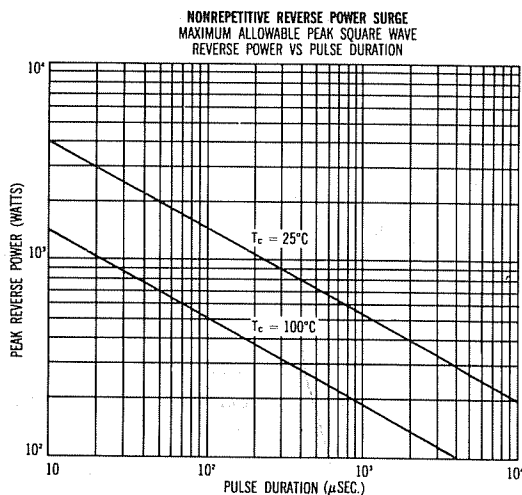


FIG. 4

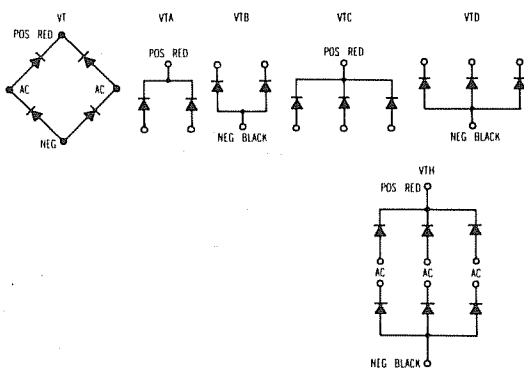


FIG. 5

PART NUMBER SELECTION CHART			
TYPE	200V	400V	600V
FULL WAVE BRIDGE	VT 200	VT 400	VT 600
CENTER TAP COMMON CATHODE	VTA200	VTA400	VTA600
CENTER TAP COMMON ANODE	VTB200	VTB400	VTB600
THREE PHASE COMMON CATHODE	VTC200	VTC400	VTC600
THREE PHASE COMMON ANODE	VTD200	VTD400	VTD600
THREE PHASE FULL WAVE BRIDGE*	VTH200	VTH400	VTH600

*Assembly of VTC and VTD (200V, 400V, or 600V) in single mounting flange. See drawing.

NOTE: Standard device has flags-only termination.

To order TO-3 Mount add /T to part no.

To order Single Stud Mount add /S to part no.