WON-TOP ELECTRONICS

S50VT60 – S50VT160

50A GLASS PASSIVATED THREE-PHASE BRIDGE RECTIFIER MODULE

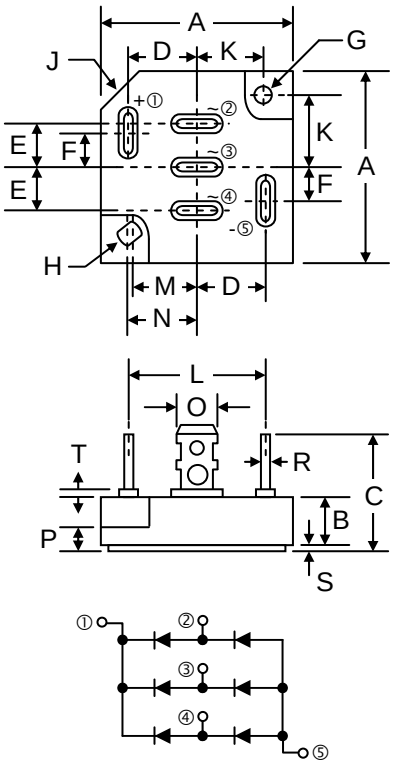
RoHS Pb

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Plastic Material has UL Recognition Flammability Classification Rating 94V-0

Mechanical Data

- Case: Epoxy Case Mounted in the Bridge Encapsulation
- Terminals: Plated Faston Lugs Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram Below
- Weight: 45 grams (approx.)
- Mounting Position: Bolt Down on Heatsink With Silicone Thermal Compound Between Module and Mounting Surface for Maximum Heat Transfer Efficiency
- Mounting Torque: 0.8 N.m Max.
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



SVT		
Dim	**Min**	**Max**
A	34.5	36.0
B	9.8	10.4
C	27.0	29.0
D	13.1	14.1
E	8.5	9.5
F	6.5	7.5
G	3.5 Ø Typical	
H	R 1.75 Typical	
J	3.7 x 45°	
K	—	12.8
L	26.2	28.2
M	—	12.5
N	—	13.1
O	6.2	6.5
P	5.5	6.5
R	0.7	0.9
S	1.0	1.8
T	1.4	1.6
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	S50VT60	S50VT80	S50VT160	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	800	1600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	560	1120	V
Average Rectified Output Current @T_C = 100°C	I_O	50			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	500			A
Forward Voltage per diode @I_F = 17.5A	V_{FM}	1.05			V
Peak Reverse Current At Rated DC Blocking Voltage	I_{RM}	10			μA
I^2t Rating for Fusing per diode (1ms < t < 10ms)	I^2t	500			A^2s
Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	0.7			°C/W
RMS Isolation Voltage Terminals to Case, t = 1min	V_{ISO}	2000			V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150			°C

Note: 1. Mounted on 229 x 152 x 127mm Al. finned heatsink.

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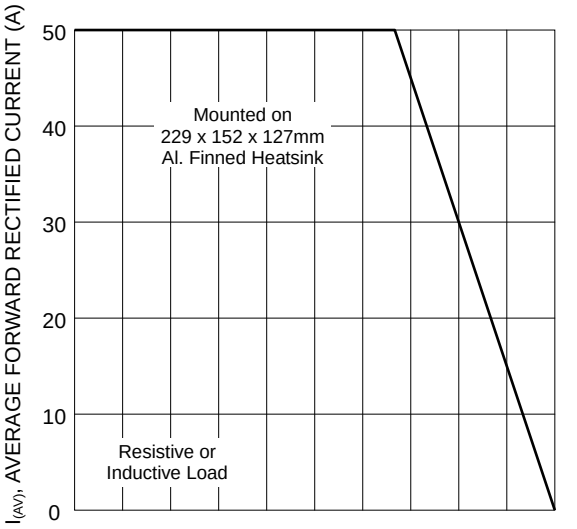


Fig. 1 Forward Current Derating Curve

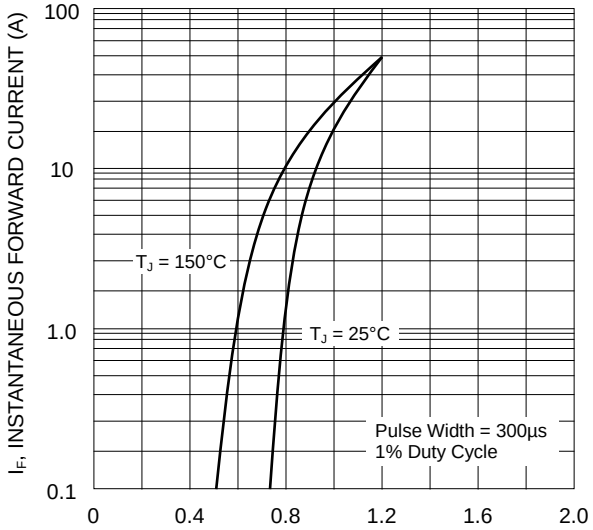


Fig. 2 Typical Forward Characteristics

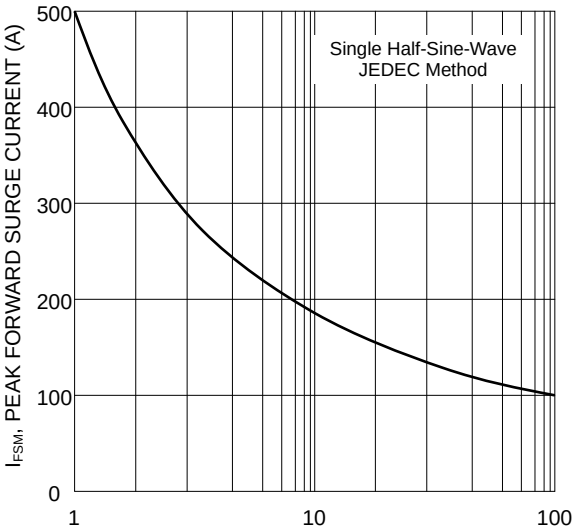


Fig. 3 Forward Surge Current Derating Curve

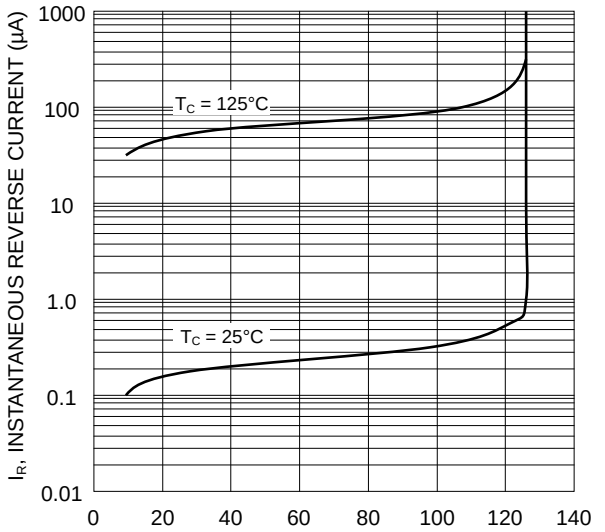


Fig. 4 Typical Reverse Characteristics

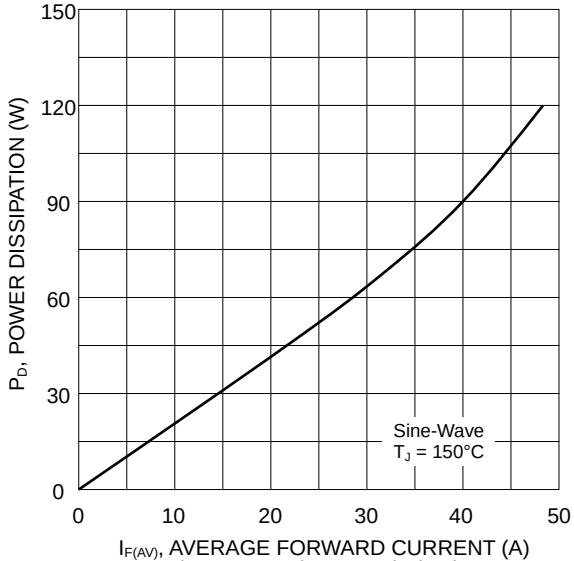
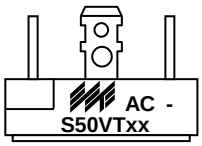


Fig. 5 Forward Power Dissipation

MARKING INFORMATION



S50VTxx = Device Number
xx = 60, 80 or 160
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
195 x 195 x 40	25	405 x 205 x 240	250	12.0

Note: 1. Paper box, white or brown color.

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ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
S50VT60	Bridge Module	25 Units/Box
S50VT80	Bridge Module	25 Units/Box
S50VT160	Bridge Module	25 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, S50VT60-LF**.

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We power your everyday.