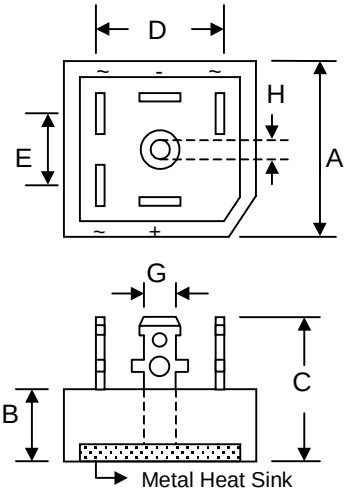
MT25, 35 SERIES

25, 35A THREE PHASE BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- UL Recognized File # E157705



MT		
Dim	**Min**	**Max**
A	28.40	28.70
B	10.97	11.23
C	22.86	23.86
D	—	25.30
E	16.00 Typical	
G	6.35 x 0.80	
H	5.10 Ø	5.30 Ø
All Dimensions in mm		

Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 20 grams (approx.)
- Mounting Position: Bolt Down on Heatsink With Silicone Thermal Compound Between Bridge and Mounting Surface for Maximum Heat Transfer Efficiency
- Mounting Torque: 20 in. lbs Max.
- Marking: Type Number

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%.

Voltage Ratings

Characteristics	Symbol	-00	-01	-02	-04	-06	-08	-10	-12	-14	-16	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	1200	1400	1600	V
Peak Non-Repetitive Reverse Voltage	V_{RSM}	75	150	275	500	725	900	1100	1300	1500	1700	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	1120	V

Forward Conduction

Characteristic	Symbol	MT25	MT35	Unit
Average Rectified Output Current MT25 @T_C = 70°C, MT35 @ T_C = 60°C	I_O	25	35	A
Non-Repetitive Peak Forward Surge Current (No Voltage Reapplied t = 8.3ms at 60Hz) (No Voltage Reapplied t = 10ms at 50Hz) (100% V_{RRM} Reapplied t = 8.3ms at 60Hz) (100% V_{RRM} Reapplied t = 8.3ms at 50Hz)	I_{FSM}	 375 360 314 300	 500 475 420 400	A

I^2t Rating for Fusing (No-Voltage Reapplied t = 8.3ms at 60Hz) (No-Voltage Reapplied t = 10ms at 50Hz) (100% V_{RRM} Reapplied t = 8.3ms at 60Hz) (100% V_{RRM} Reapplied t = 10ms at 50Hz)	I^2t	580 635 410 450	1030 1130 730 800	A^2s
Forward Voltage (per element) @T_j = 25°C, @I_{FM} = 40A_{pk} per single junction	V_F	1.26	1.19	V
Peak Reverse Current (per leg) @T_j = 25°C At Rated DC Blocking Voltage @T_j = 125°C	I_R	10 5.0		µA mA
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500		V

Thermal Characteristics

Operating Temperature Range	T_j	-40 to +150		°C
Storage Temperature Range	T_{STG}	-40 to +150		°C
Thermal Resistance Junction to Case at DC Operation per Bridge	$R_{\theta JC}$	1.42	1.16	K/W
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased	$R_{\theta CS}$	0.2		K/W

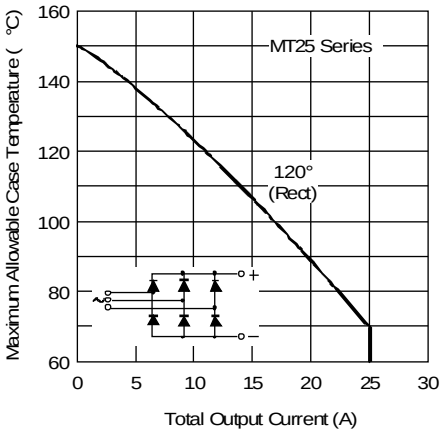


Fig. 1 - Current Ratings Characteristics

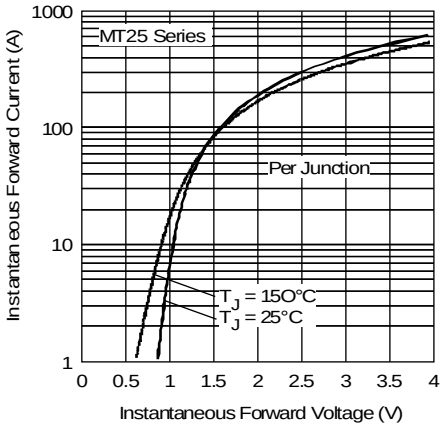


Fig. 2 - Forward Voltage Drop Characteristics

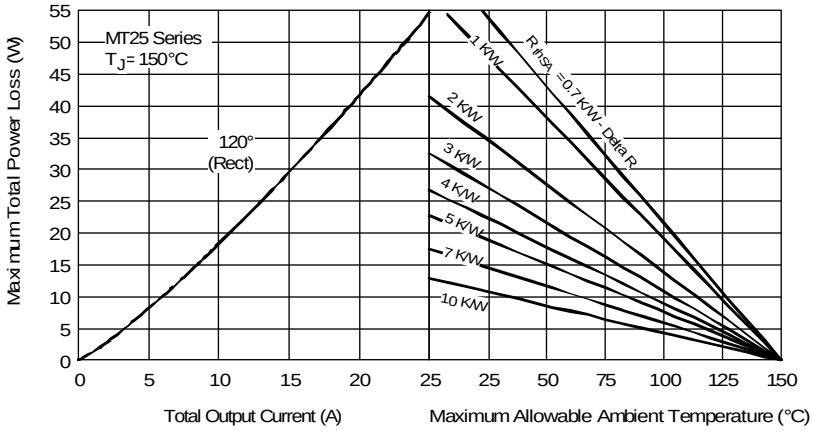


Fig. 3 - Total Power Loss Characteristics

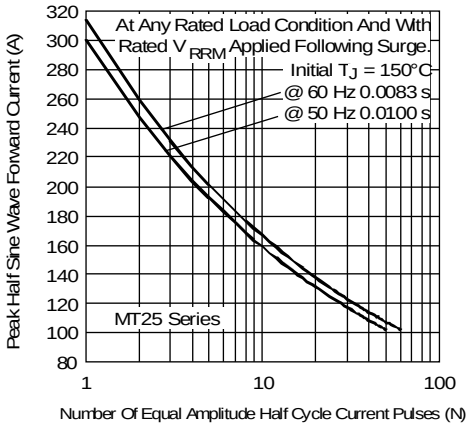


Fig. 4 - Maximum Non-Repetitive Surge Current

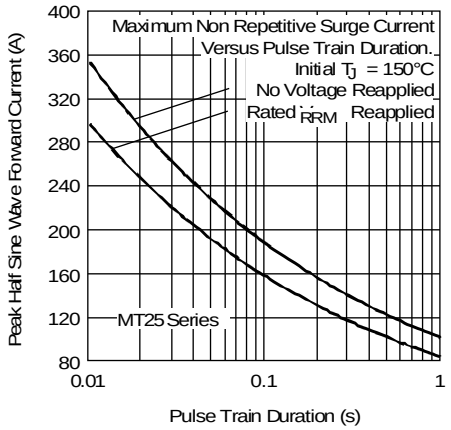


Fig. 5 - Maximum Non-Repetitive Surge Current

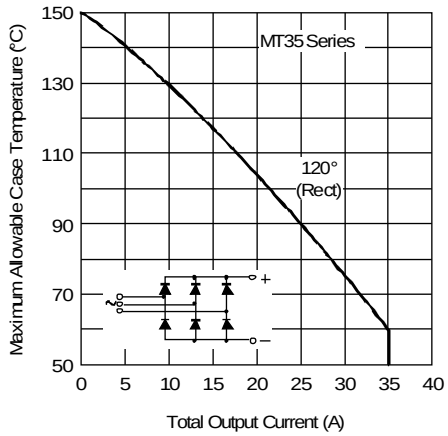


Fig. 6 - Current Ratings Characteristics

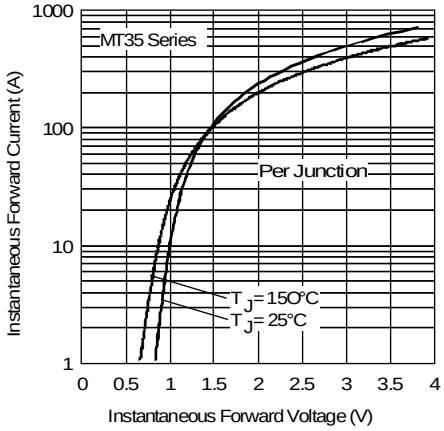


Fig. 7 - Forward Voltage Drop Characteristics

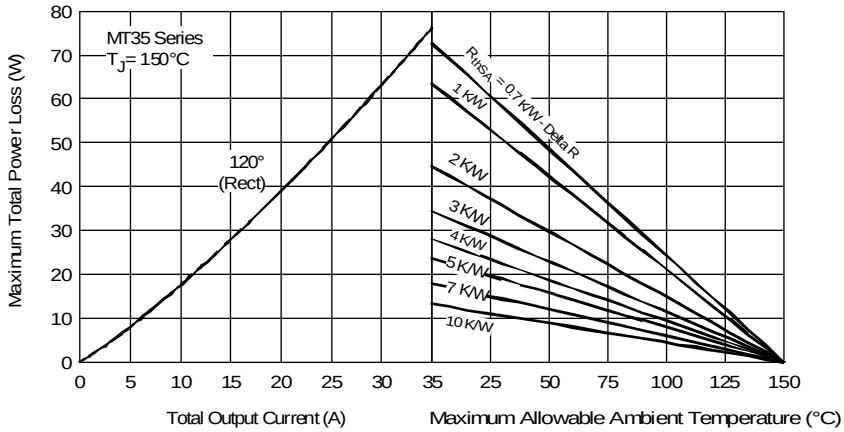


Fig. 8 - Total Power Loss Characteristics

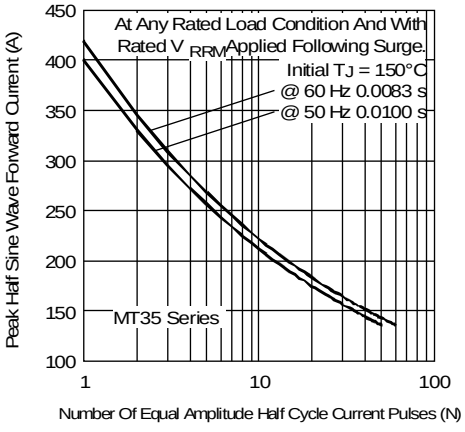


Fig. 9 - Maximum Non-Repetitive Surge Current

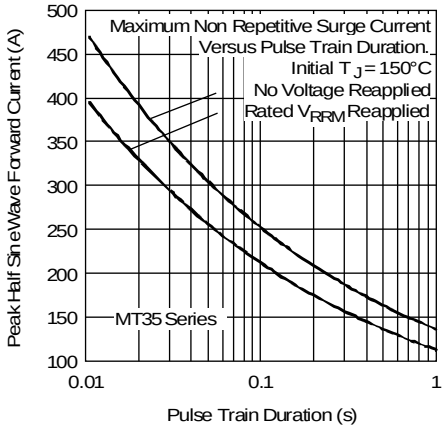


Fig. 10 - Maximum Non-Repetitive Surge Current

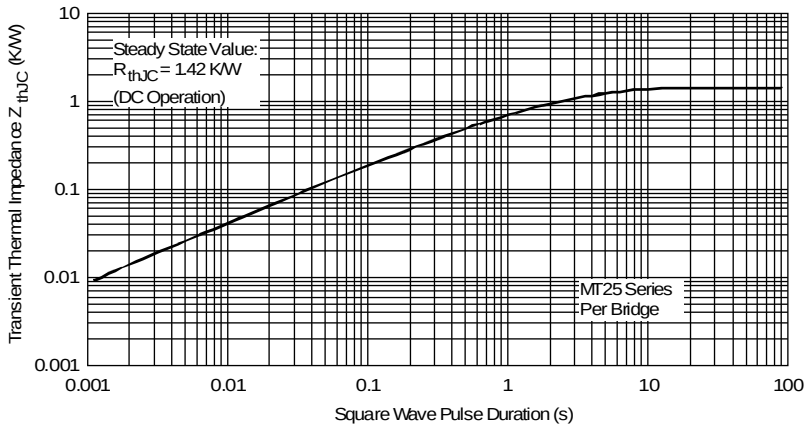


Fig. 11 - Thermal Impedance Z_{thJC} Characteristics

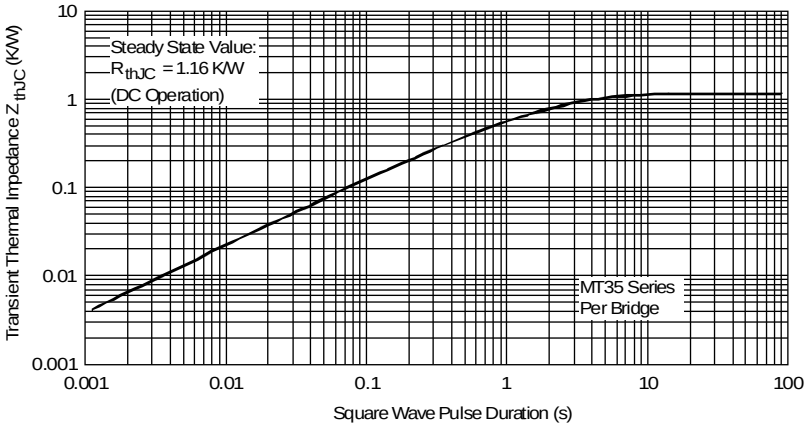


Fig. 12 - Thermal Impedance Z_{thJC} Characteristics

