CURRENT 25~35 Ampere
VOLTAGE RANG 50 to 1000 Volts

MT2516 THRU MT3516

FEATURES

- Universal, 3 way terminals: push-on, wrap around or solder
- High thermal conductivity package, electrically insulated case
- Center hole fixing
- Excellent power/volume ratio
- Nickel plated terminals solderable using lead (Pb)-free solder; solder alloy Sn/Ag/Cu (SAC305); solder temperature 260 to 275 °C
- RoHS compliant
- Designed and qualified for industrial and consumer level

  This series is SGS listed under the Recognized Component Index, file number SZXEC1902259902

RoHS COMPLIANT

D-63

DESCRIPTION

A range of extremely compact, encapsulated single phase bridge rectifiers offering efficient and reliable operation. They are intended for use in general purpose and instrumentation applications.

PRODUCT SUMMARY	
I_O	25 A/35 A

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

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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

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MT2500	Square Bridge	50 Units/Box
MT2501	Square Bridge	50 Units/Box
MT2502	Square Bridge	50 Units/Box
MT2504	Square Bridge	50 Units/Box
MT2506	Square Bridge	50 Units/Box
MT2508	Square Bridge	50 Units/Box
MT2510	Square Bridge	50 Units/Box
MT2512	Square Bridge	50 Units/Box
MT2514	Square Bridge	50 Units/Box
MT2516	Square Bridge	50 Units/Box
MT3500	Square Bridge	50 Units/Box
MT3501	Square Bridge	50 Units/Box
MT3502	Square Bridge	50 Units/Box
MT3504	Square Bridge	50 Units/Box
MT3506	Square Bridge	50 Units/Box
MT3508	Square Bridge	50 Units/Box
MT3510	Square Bridge	50 Units/Box
MT3512	Square Bridge	50 Units/Box
MT3514	Square Bridge	50 Units/Box
MT3516	Square Bridge	50 Units/Box

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Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)

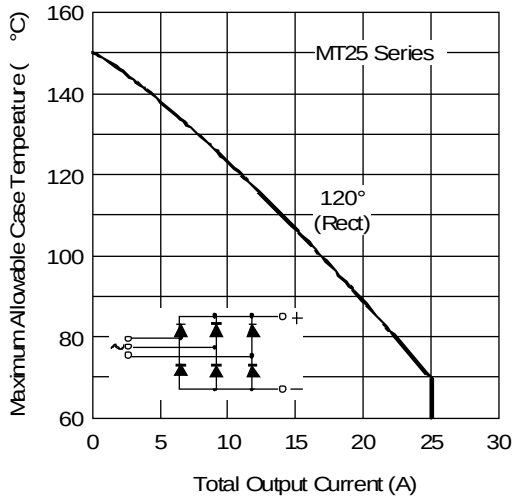

Fig. 1 - Current Ratings Characteristics

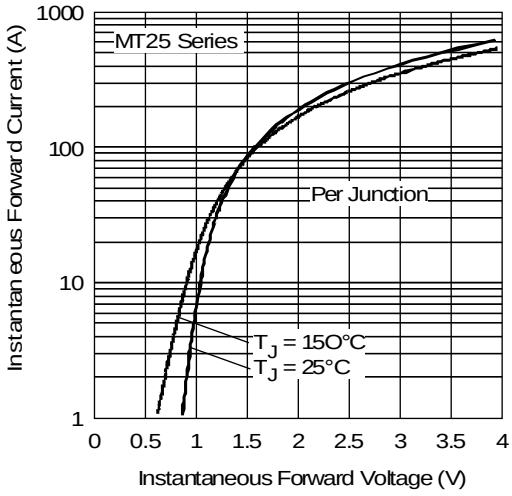

Fig. 2 - Forward Voltage Drop Characteristics

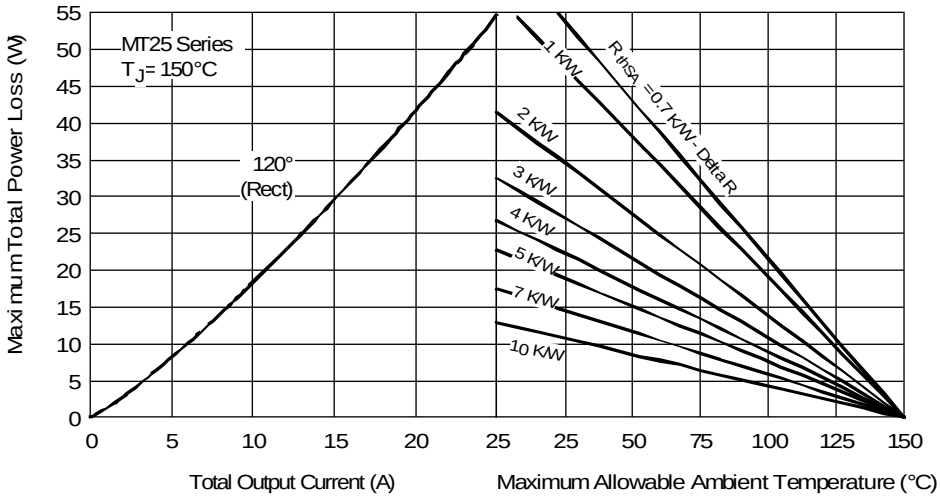

Fig. 3 - Total Power Loss Characteristics

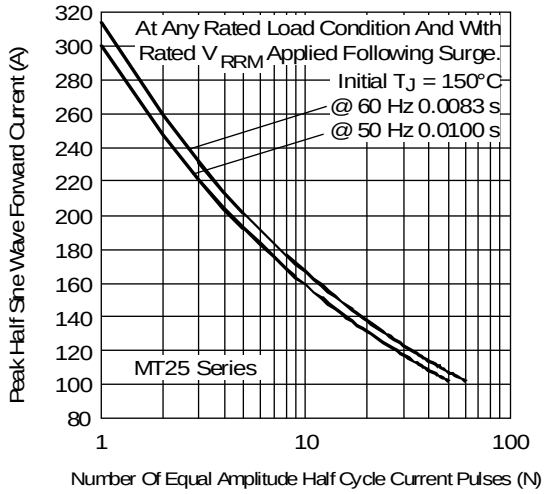

Fig. 4 - Maximum Non-Repetitive Surge Current

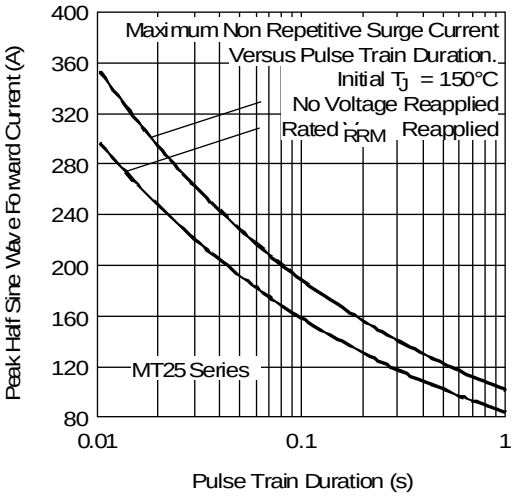

Fig. 5 - Maximum Non-Repetitive Surge Current

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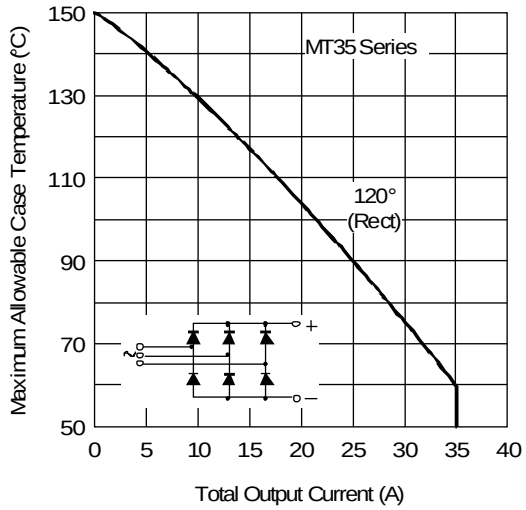

Fig. 6 - Current Ratings Characteristics

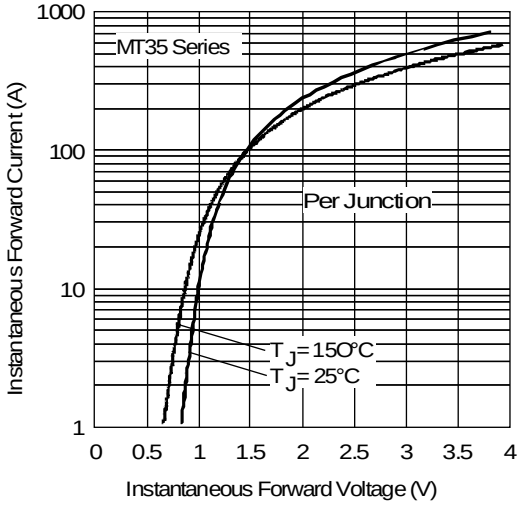

Fig. 7 - Forward Voltage Drop Characteristics

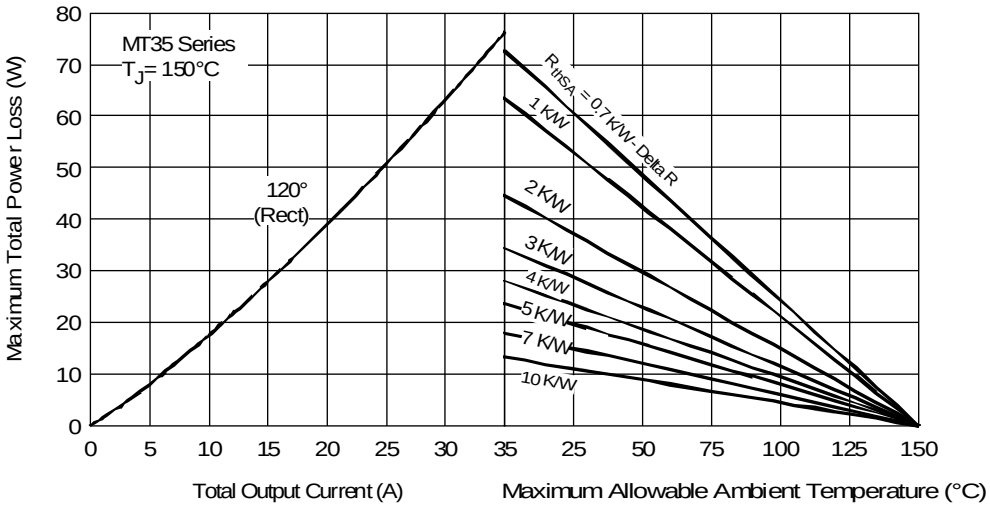

Fig. 8 - Total Power Loss Characteristics

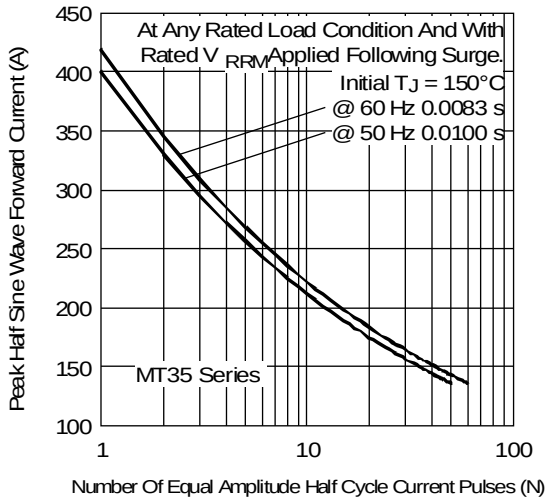

Fig. 9 - Maximum Non-Repetitive Surge Current

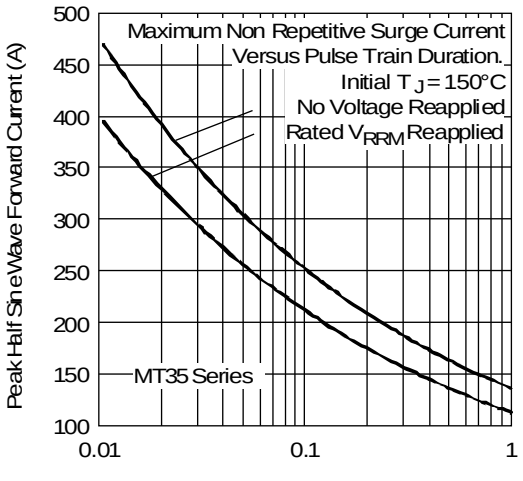

Fig. 10 - Maximum Non-Repetitive Surge Current

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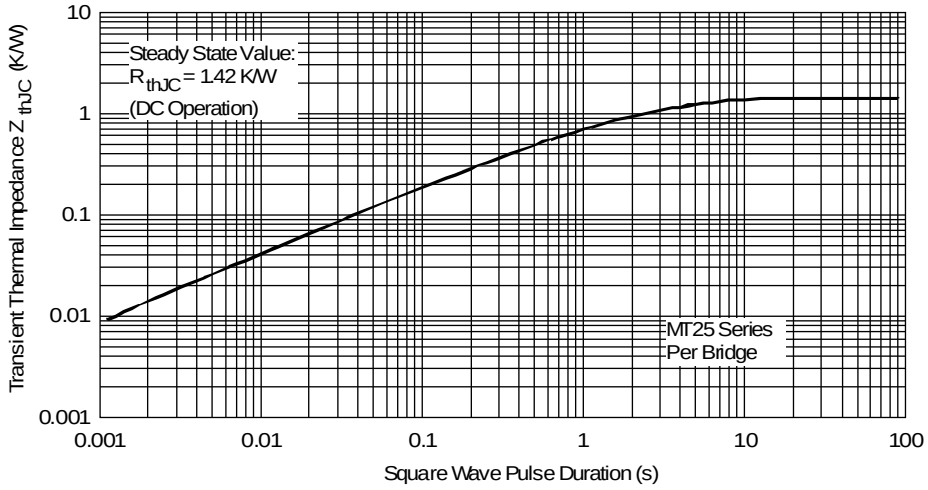


Fig. 11 - Thermal Impedance Z_{thJC} Characteristics

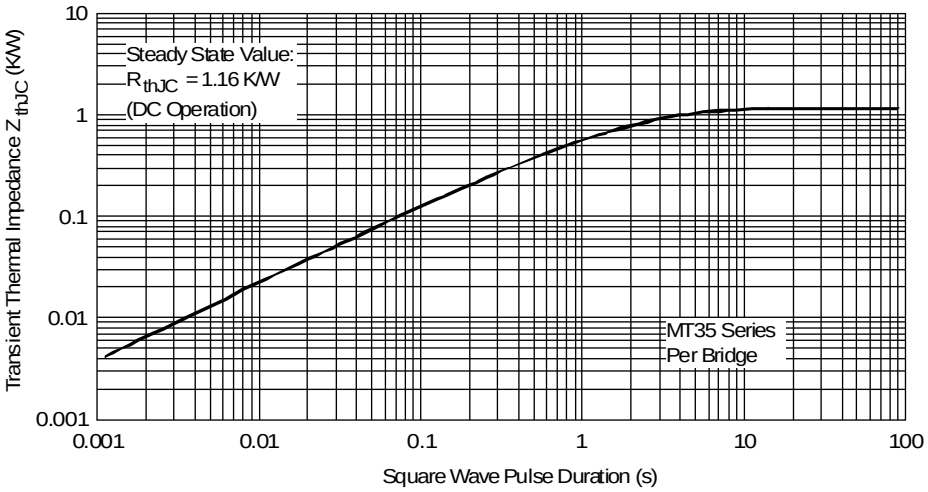
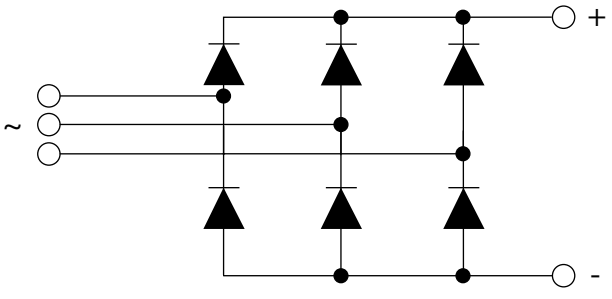


Fig. 12 - Thermal Impedance Z_{thJC} Characteristics

CIRCUIT CONFIGURATION



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ORDERING INFORMATION TABLE

Device code

MT	35	16
①	②	③

① - Basic part number

② - Current rating code — 26 = 25 A (average); 36 = 35 A (average)

③ - Voltage code x 10 = V_{RRM}

Outline Table