

Three Phase Bridge (Power Modules), 25/35 A


D-63

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
- UL E300359 approved 
- Gold 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


RoHS
COMPLIANT

PRODUCT SUMMARY

I_o	25/35 A
-------	---------

DESCRIPTION

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

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	26MT	36MT	UNITS
I_o		25	35	A
	T_c	70	60	°C
I_{FSM}	50 Hz	360	475	A
	60 Hz	375	500	
I^2t	50 Hz	635	1130	A ² s
	60 Hz	580	1030	
V_{RRM}		100 to 1600		V
T_J		- 55 to 150		°C

ELECTRICAL SPECIFICATIONS

VOLTAGE RATINGS

TYPE NUMBER	VOLTAGE CODE	V_{RRM} , MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE V	V_{RSM} , MAXIMUM NON-REPETITIVE PEAK REVERSE VOLTAGE V	I_{RRM} MAXIMUM AT T_J MAXIMUM mA
26MT../36MT..	10	100	150	2
	20	200	275	
	40	400	500	
	60	600	725	
	80	800	900	
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

Three Phase Bridge
(Power Modules), 25/35 A

FORWARD CONDUCTION							
PARAMETER	SYMBOL	TEST CONDITIONS			VALUES		UNITS
					26MT	36MT	
Maximum DC output current at T _C	I _O	120° rect. conduction angle			25	35	A
					70	60	°C
Maximum peak, one-cycle non-repetitive forward current	I _{FSM}	t = 10 ms	No voltage reapplied	Initial T _J = T _J maximum	360	475	A
		t = 8.3 ms			375	500	
		t = 10 ms	100 % V _{RRM} reapplied		300	400	
		t = 8.3 ms			314	420	
Maximum I ² t for fusing	I ² t	t = 10 ms	No voltage reapplied		635	1130	A ² s
		t = 8.3 ms			580	1030	
		t = 10 ms	100 % V _{RRM} reapplied		450	800	
		t = 8.3 ms			410	730	
Maximum I ² √t for fusing	I ² √t	I ² t for time t _x = I ² √t × √t _x ; 0.1 ≤ t _x ≤ 10 ms, V _{RRM} = 0 V			6360	11 300	A ² √s
Low level of threshold voltage	V _{F(TO)1}	(16.7 % × π × I _{F(AV)} < I < π × I _{F(AV)}), T _J maximum			0.88	0.86	V
High level of threshold voltage	V _{F(TO)2}	(I > π × I _{F(AV)}), T _J maximum			1.13	1.03	
Low level forward slope resistance	r _{t1}	(16.7 % × π × I _{F(AV)} < I < π × I _{F(AV)}), T _J maximum			7.9	6.3	mΩ
High level forward slope resistance	r _{t2}	(I > π × I _{F(AV)}), T _J maximum			5.2	5.0	
Maximum forward voltage drop	V _{FM}	T _J = 25 °C, I _{FM} = 40 Apk - per single junction			1.26	1.19	V
Maximum DC reverse current	I _{RRM}	T _J = 25 °C, per junction at rated V _{RRM}			100		μA
RMS isolation voltage	V _{INS}	T _J = 25 °C, all terminal shorted; f = 50 Hz, t = 1 s			2700		V

THERMAL - MECHANICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS	VALUES		UNITS
			26MT	36MT	
Maximum junction and storage temperature range	T _J , T _{Stg}		- 55 to 150		°C
Maximum thermal resistance, junction to case	R _{thJC}	DC operation per bridge (based on total power loss of bridge)	1.42	1.35	K/W
Maximum thermal resistance, case to heatsink	R _{thCS}	Mounting surface, smooth, flat and greased	0.2	0.2	
Approximate weight			20		g
Mounting torque ± 10 %		Bridge to heatsink with screw M4	2.0		Nm

Three Phase Bridge (Power Modules), 25/35 A

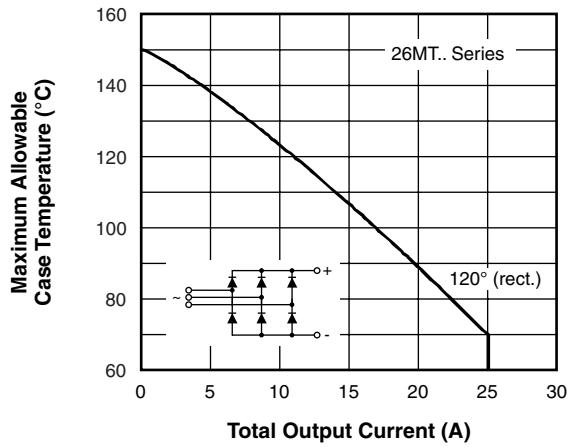


Fig. 1 - Current Ratings Characteristics

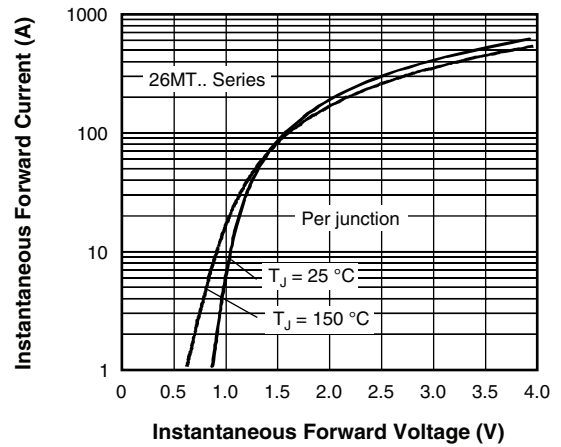


Fig. 2 - Forward Voltage Drop Characteristics

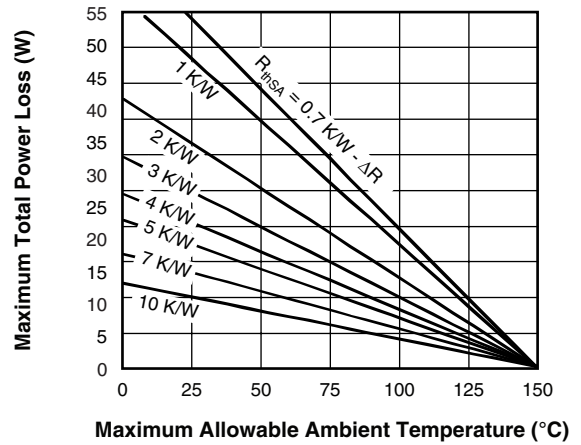
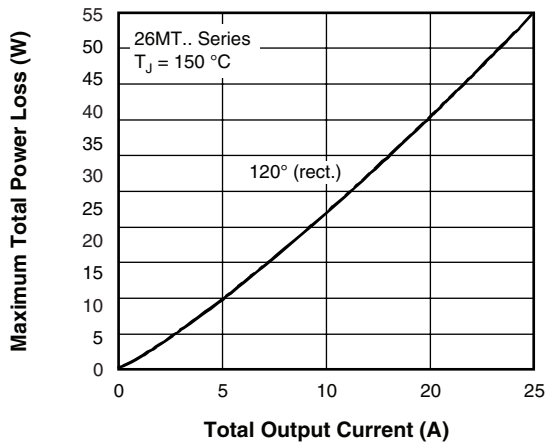


Fig. 3 - Total Power Loss Characteristics

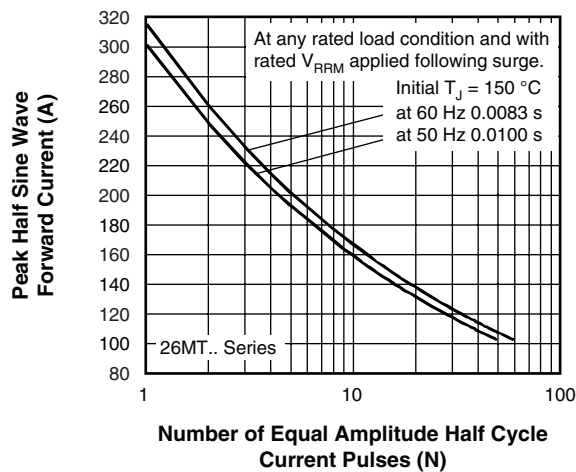


Fig. 4 - Maximum Non-Repetitive Surge Current

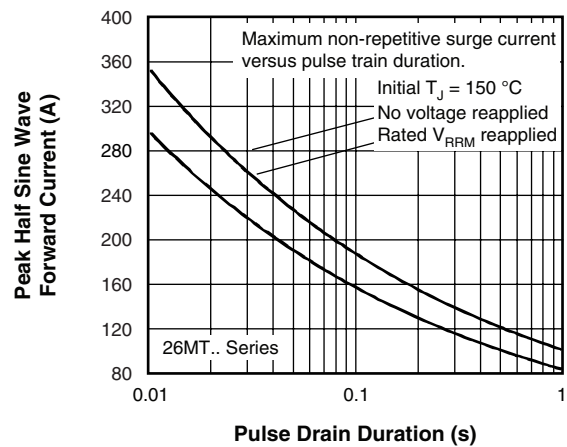


Fig. 5 - Maximum Non-Repetitive Surge Current

Three Phase Bridge (Power Modules), 25/35 A

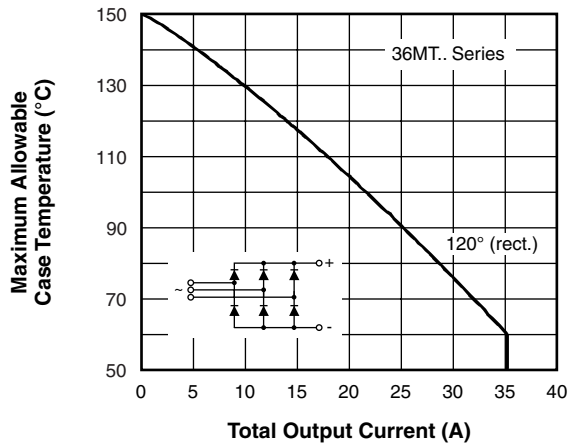


Fig. 6 - Current Ratings Characteristics

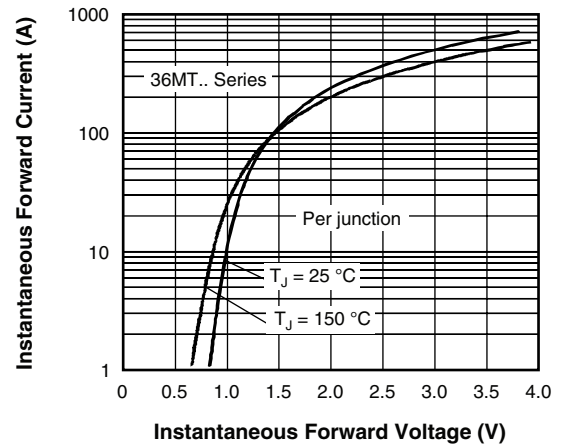


Fig. 7 - Forward Voltage Drop Characteristics

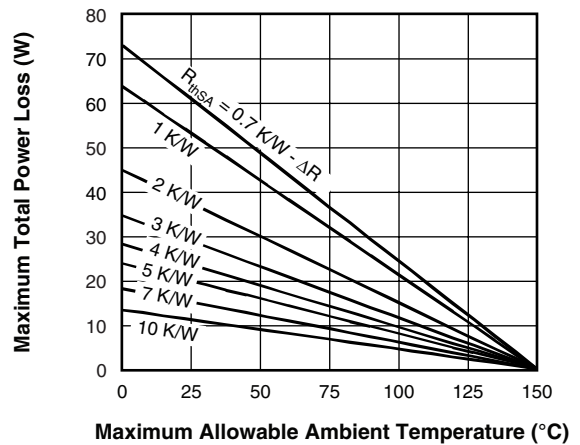
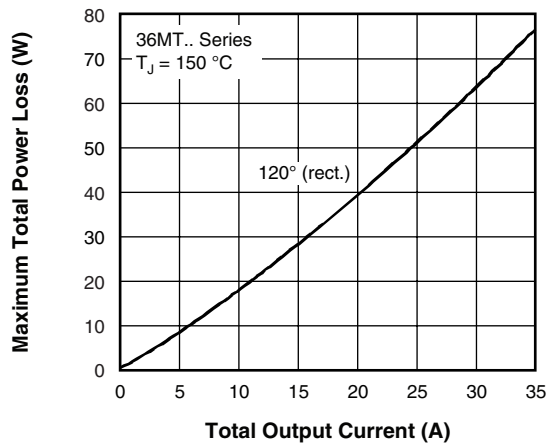


Fig. 8 - Total Power Loss Characteristics

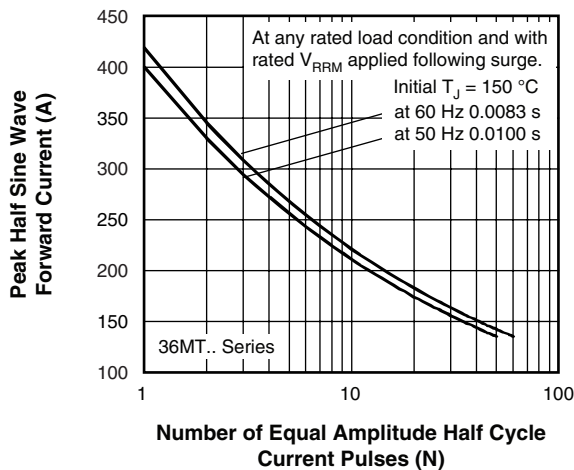


Fig. 9 - Maximum Non-Repetitive Surge Current

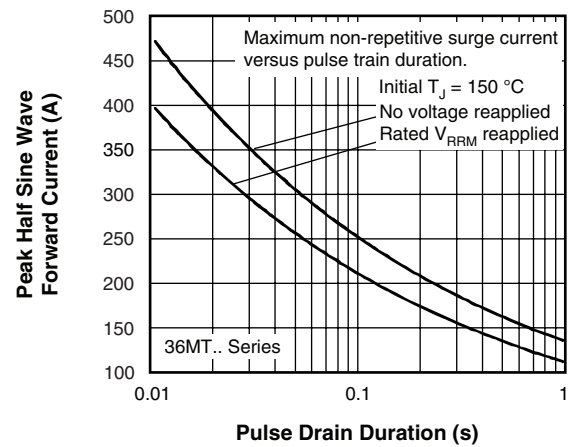


Fig. 10 - Maximum Non-Repetitive Surge Current

Three Phase Bridge (Power Modules), 25/35 A

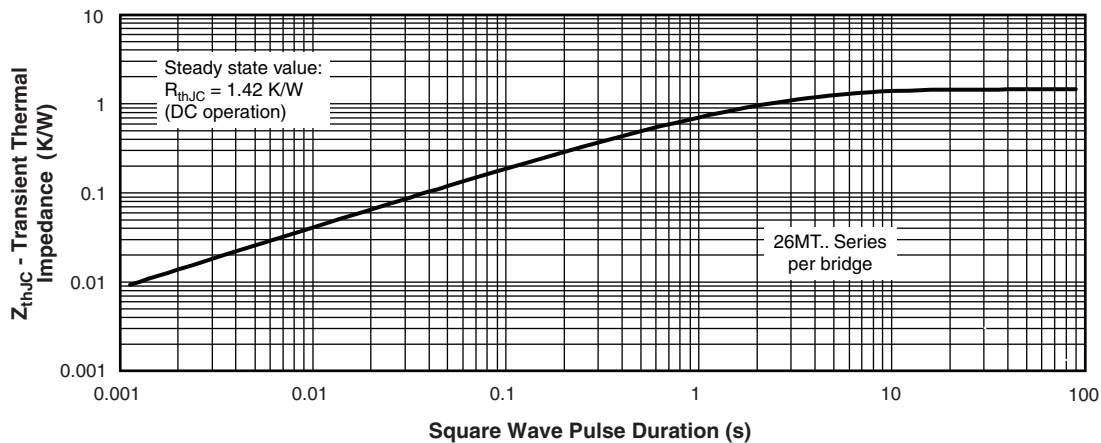


Fig. 11 - Thermal Impedance Z_{thJC} Characteristics

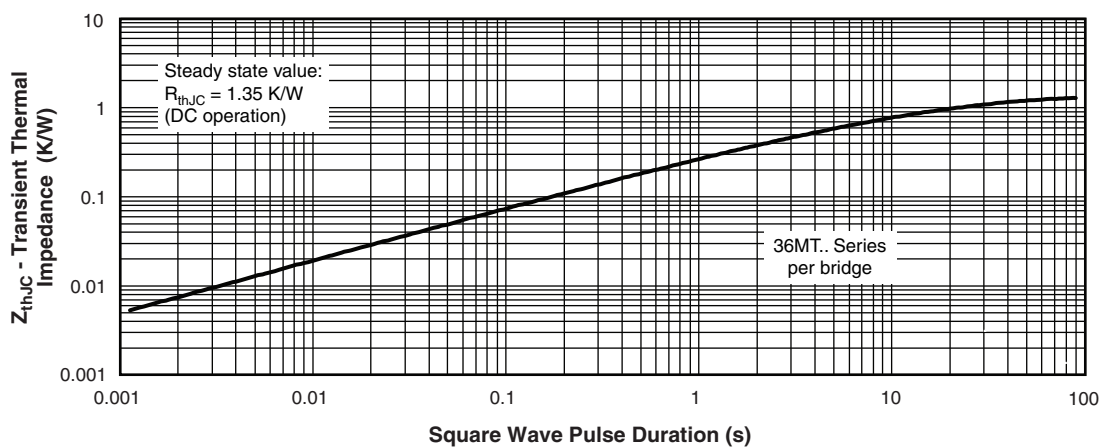


Fig. 12 - Thermal Impedance Z_{thJC} Characteristics



Three Phase Bridge
(Power Modules), 25/35 A

ORDERING INFORMATION TABLE

Device code

36	MT	160
①	②	③

1

2

3

-

-

-

Current rating code

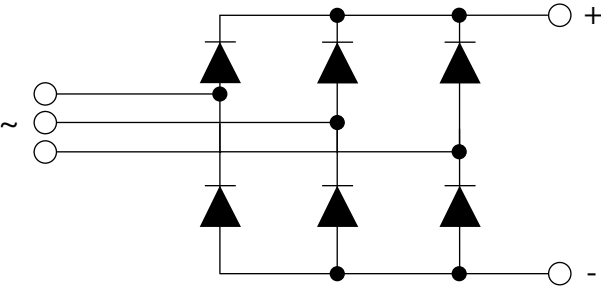
Basic part number

Voltage code x 10 = V_{RRM}

26 = 25 A (average)

36 = 35 A (average)

CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95251

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.