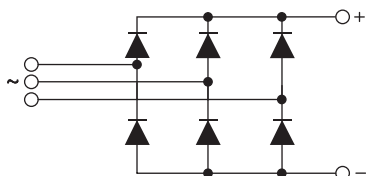




Three Phase Bridge Power Modules



D-34A



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

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

PARAMETER		26MT	36MT	UNITS
I_O		25	35	A
	at T_C	70	60	°C
I_{FSM}	at 50 Hz	360	475	A
	at 60 Hz	375	500	
I^2t	at 50 Hz	635	1130	A ² s
	at 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	

FORWARD CONDUCTION								
PARAMETER	SYMBOL	TEST CONDITIONS			26MT	36MT	UNITS	
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 Initial T _J = T _J maximum	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 Initial T _J = T _J maximum	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 x √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 % x π x I _{F(AV)}) < I < π x I _{F(AV)}), at T _J maximum			0.88	0.86	V	
High-level of threshold voltage	V _{F(TO)2}	(I > π x I _{F(AV)}), at T _J maximum			1.13	1.03		
Low-level forward slope resistance	r _{t1}	(16.7 % x π x I _{F(AV)}) < I < π x I _{F(AV)}), at T _J maximum			7.9	6.3	mΩ	
High-level forward slope resistance	r _{t2}	(I > π x I _{F(AV)}), at 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	

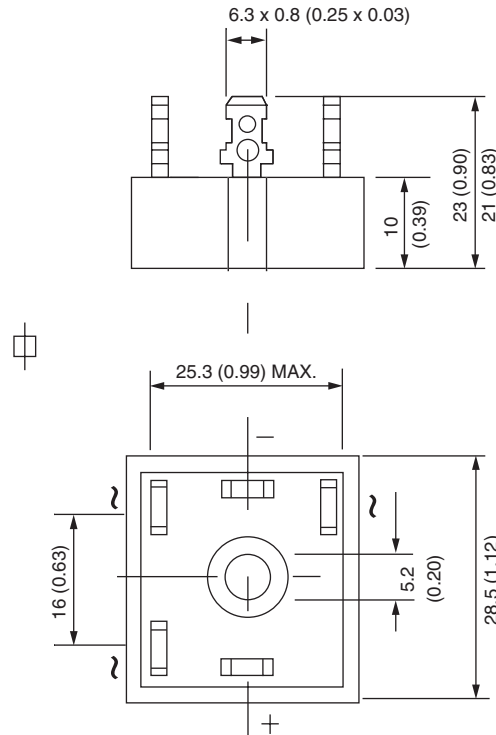
THERMAL AND MECHANICAL SPECIFICATIONS						
PARAMETER	SYMBOL	TEST CONDITIONS	26MT	36MT	UNITS	
Maximum junction temperature range	T _J		- 55 to 150		°C	
Maximum storage temperature range	T _{Stg}		- 55 to 150			
Maximum thermal resistance, junction to case	R _{thJC}	DC operation per bridge (based on total 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	

ORDERING INFORMATION TABLE

Device code	36	MT	160
	1	2	3

1	-	Current rating code:	<table border="1"><tr><td>26 = 25 A (Avg)</td></tr><tr><td>36 = 35 A (Avg)</td></tr></table>	26 = 25 A (Avg)	36 = 35 A (Avg)
26 = 25 A (Avg)					
36 = 35 A (Avg)					
2	-	Basic part number			
3	-	Voltage code (code x 10 = V_{RRM})			

OUTLINE DIMENSIONS in millimeters (inches)



Suggested plugging force:
400 N maximum; axially applied to faston terminals

Not to scale

26MT../36MT..Series

Vishay High Power Products

Three Phase Bridge
Power Modules

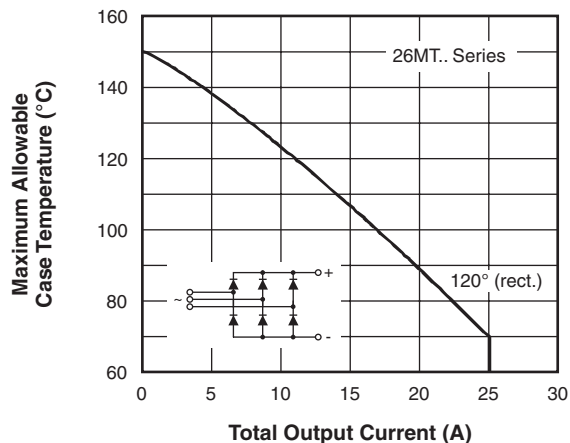


Fig. 1 - Current Ratings Characteristics

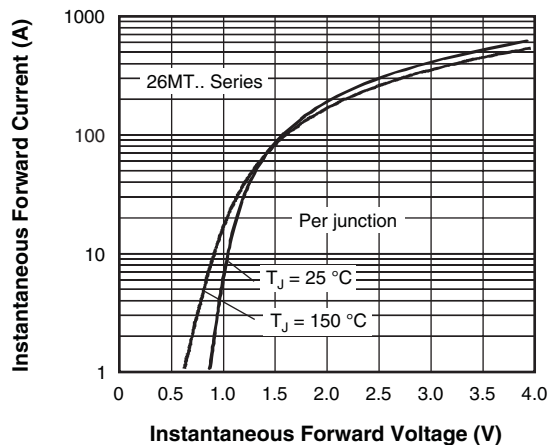


Fig. 2 - Forward Voltage Drop Characteristics

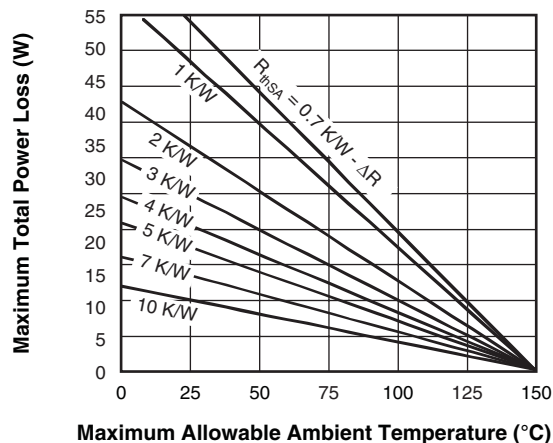
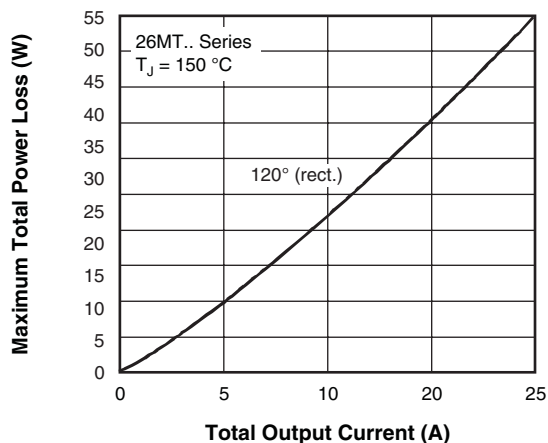


Fig. 3 - Total Power Loss Characteristics

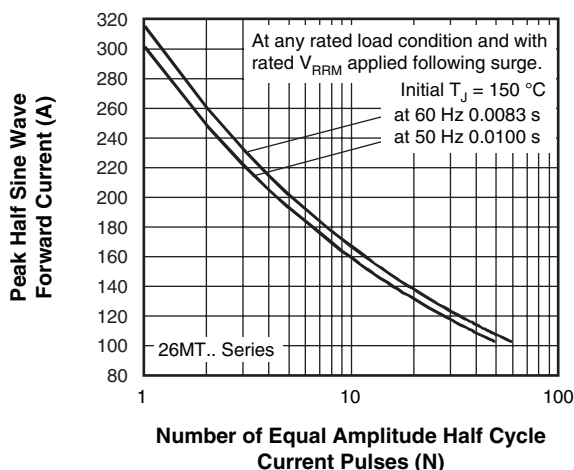


Fig. 4 - Maximum Non-Repetitive Surge Current

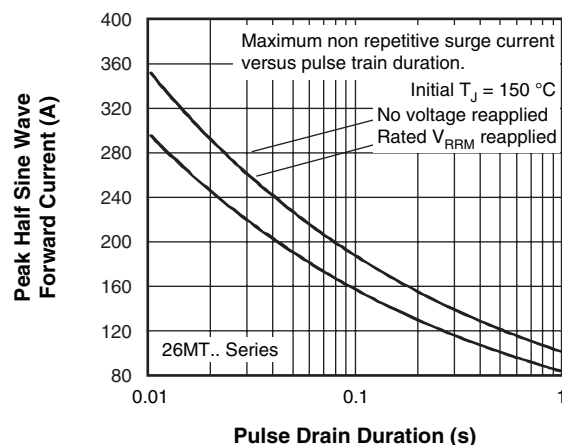


Fig. 5 - Maximum Non-Repetitive Surge Current

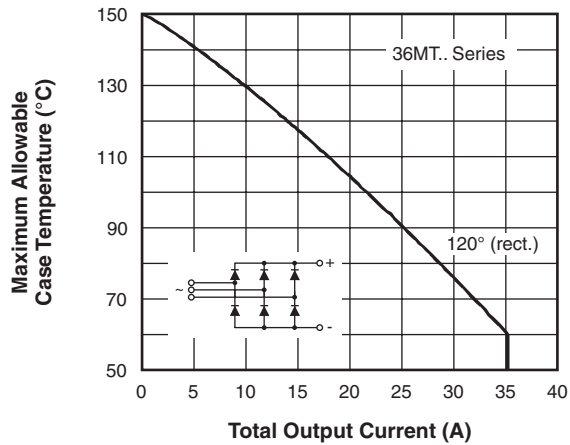


Fig. 6 - Current Ratings Characteristics

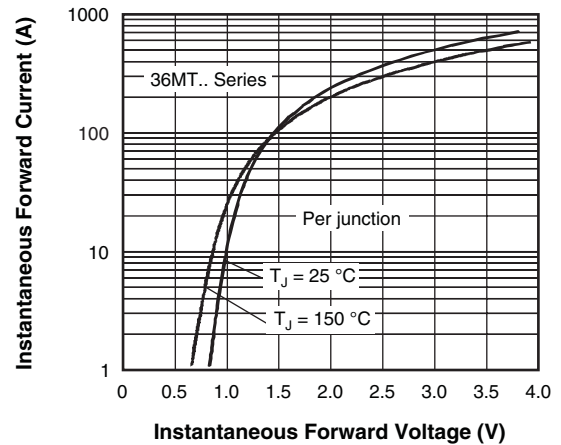


Fig. 7 - Forward Voltage Drop Characteristics

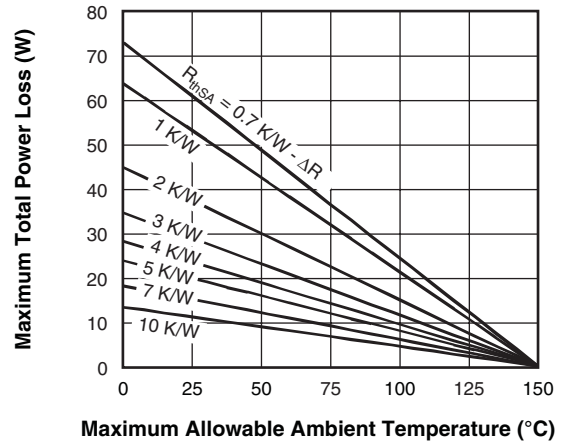
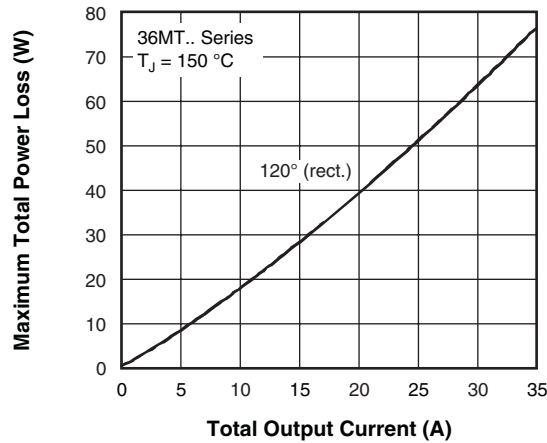


Fig. 8 - Total Power Loss Characteristics

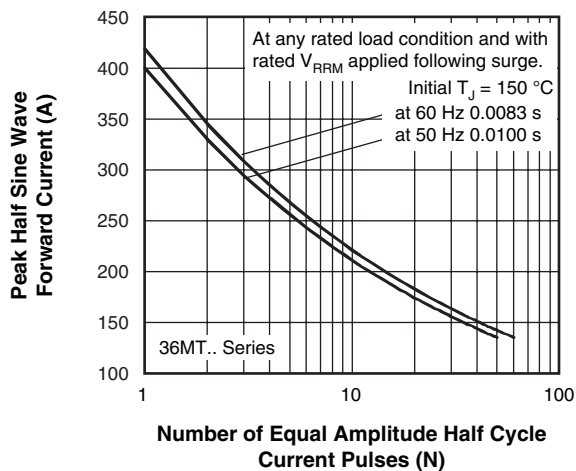


Fig. 9 - Maximum Non-Repetitive Surge Current

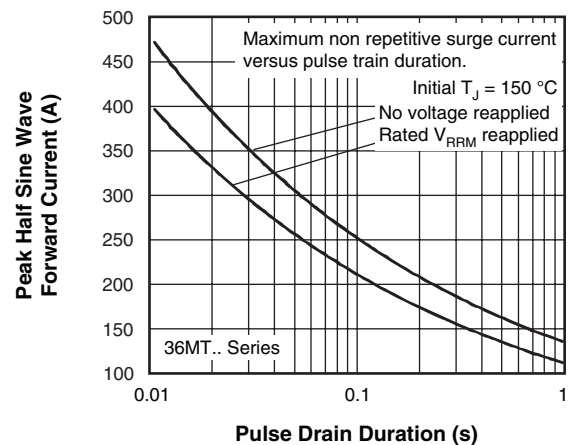


Fig. 10 - Maximum Non-Repetitive Surge Current

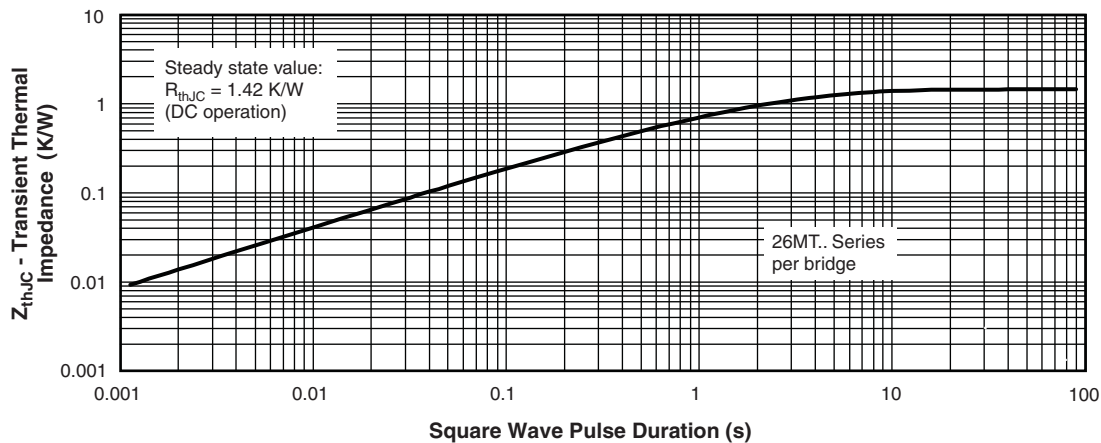


Fig. 11 - Thermal Impedance Z_{thJC} Characteristics

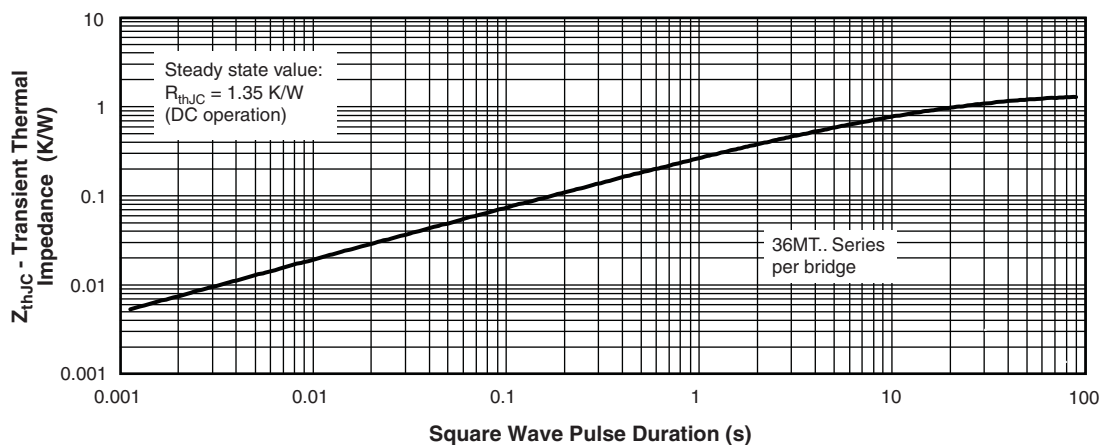


Fig. 12 Thermal Impedance Z_{thJC} Characteristics



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