


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



D-34


**RoHS
COMPLIANT**
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 
- Nickel plated terminals solderable using lead (Pb)-free solder; Solder Alloy Sn/Ag/Cu (SAC305); Solder temperature 260 °C to 275 °C
- Designed and qualified for industrial level
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

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 to 35 A
V_{RRM}	200 V to 1200 V
Package	D-34
Circuit	Single Phase Bridge

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES 26MB-A	VALUES 36MB-A	UNITS
I_o		25	35	A
	T_C	65	60	°C
I_{FSM}	50 Hz	400	475	A
	60 Hz	420	500	
I^2t	50 Hz	790	1130	A ² s
	60 Hz	725	1030	
V_{RRM}	Range	200 to 1200		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
26MB..A 36MB..A	20	200	275	2
	40	400	500	
	60	600	725	
	80	800	900	
	100	1000	1100	
	120	1200	1300	



FORWARD CONDUCTION							
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES 26MB-A	VALUES 36MB-A	UNITS	
Maximum DC output current at case temperature	I _O	Resistive or inductive load		25	35	A	
		Capacitive load		20	28		
				65	60	°C	
Maximum peak, one-cycle non-repetitive forward current	I _{FSM}	t = 10 ms	No voltage reapplied	Initial T _J = T _J maximum	400	475	A
		t = 8.3 ms					
		t = 10 ms	100 % V _{RRM} reapplied		335	400	
		t = 8.3 ms			350	420	
Maximum I ² t for fusing	I ² t	t = 10 ms	No voltage reapplied	Initial T _J = T _J maximum	790	1130	A ² s
		t = 8.3 ms					
		t = 10 ms	100 % V _{RRM} reapplied		560	800	
		t = 8.3 ms			512	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		5.6	11.3	kA ² √s	
Low level value of threshold voltage	V _{F(TO)1}	(16.7 % × π × I _{F(AV)} < I < π × I _{F(AV)}), T _J maximum		0.76	0.79	V	
High level value of threshold voltage	V _{F(TO)2}	(I > π × I _{F(AV)}), T _J maximum		0.92	0.96		
Low level forward slope resistance	r _{t1}	(16.7 % × π × I _{F(AV)} < I < π × I _{F(AV)}), T _J maximum		6.8	5.8	mΩ	
High level forward slope resistance	r _{t2}	(I > π × I _{F(AV)}), T _J maximum		5.0	4.5		
Maximum forward voltage drop	V _{FM}	T _J = 25 °C, I _{FM} = 40 A _{pk} (26MB)		t _p = 400 μs	1.11	1.14	V
		T _J = 25 °C, I _{FM} = 55 A _{pk} (36MB)					
Maximum DC reverse current	I _{RRM}	T _J = 25 °C, per diode at V _{RRM}		10		μA	
RMS isolation voltage base plate	V _{INS}	f = 50 Hz, t = 1 s		2700		V	

THERMAL AND MECHANICAL SPECIFICATIONS						
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES 26MB-A	VALUES 36MB-A	UNITS
Junction and storage temperature range	T _J , T _{Stg}			- 55 to 150		°C
Maximum thermal resistance junction to case per bridge	R _{thJC}			1.7	1.2	K/W
Maximum thermal resistance, case to heatsink	R _{thCS}	Mounting surface, smooth, flat and greased		0.2		
Approximate weight				20		g
Mounting torque ± 10 %		Bridge to heatsink		2.0		Nm

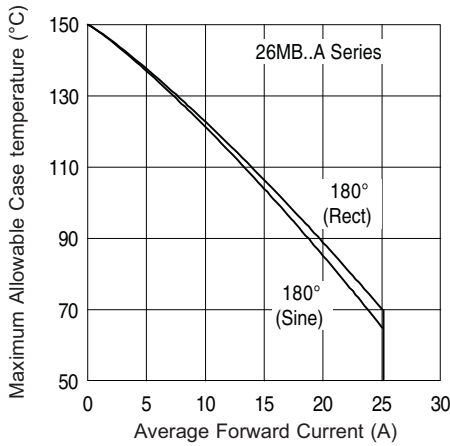


Fig. 1 - Current Ratings Characteristics

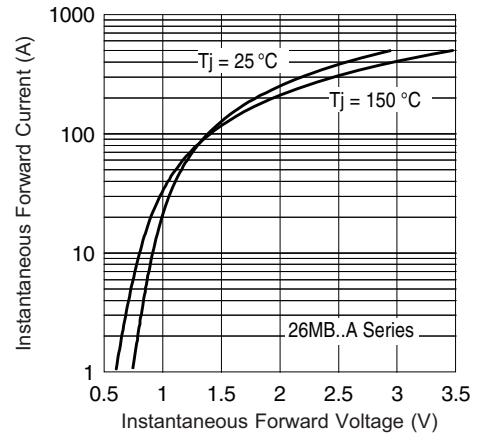


Fig. 2 - Forward Voltage Drop Characteristics Maximum Allowable Ambient Temperature

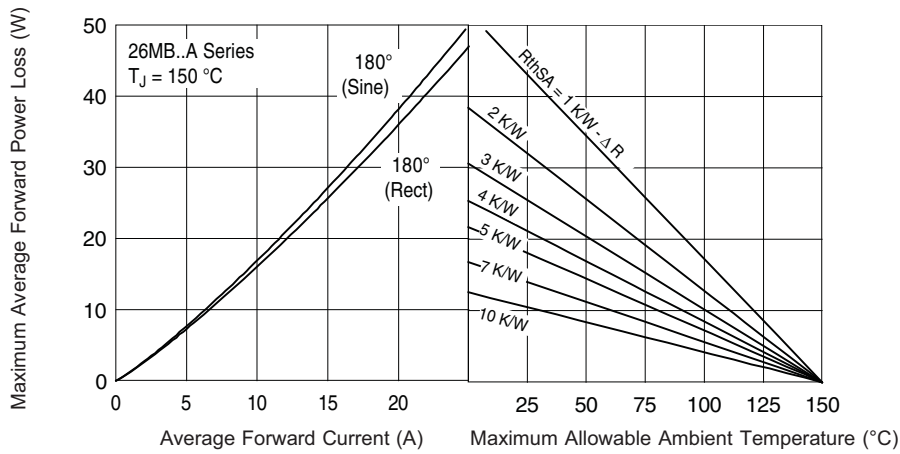


Fig. 3 - Total Power Loss Characteristics

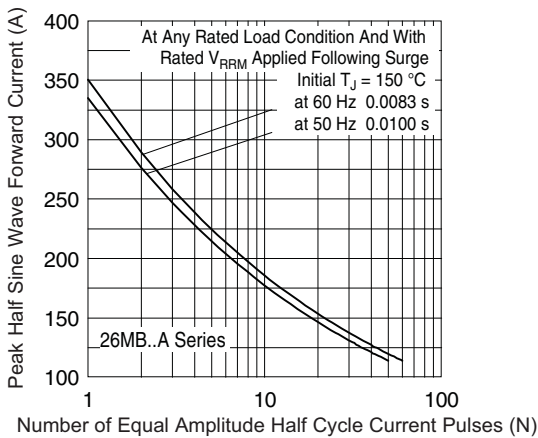


Fig. 4 - Maximum Non-Repetitive Surge Current

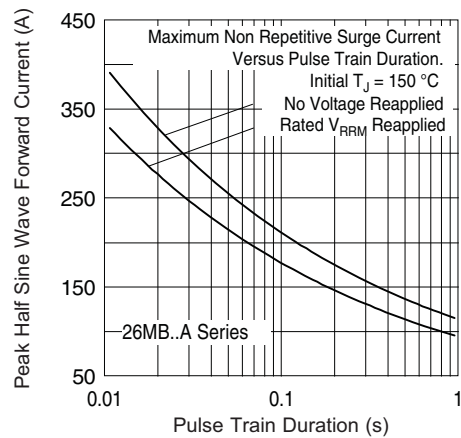


Fig. 5 - Maximum Non-Repetitive Surge Current

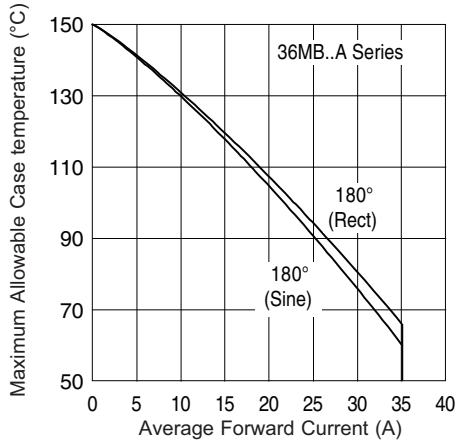


Fig. 6 - Current Ratings Characteristics

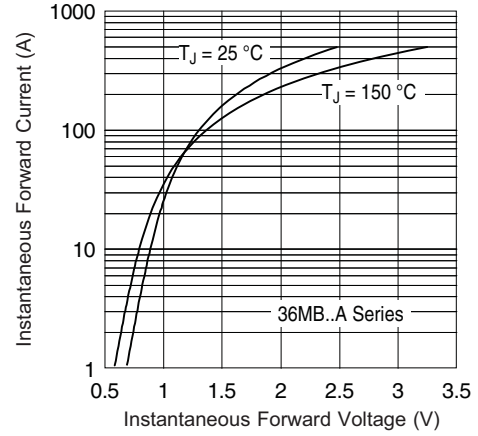


Fig. 7 - Forward Voltage Drop Characteristics

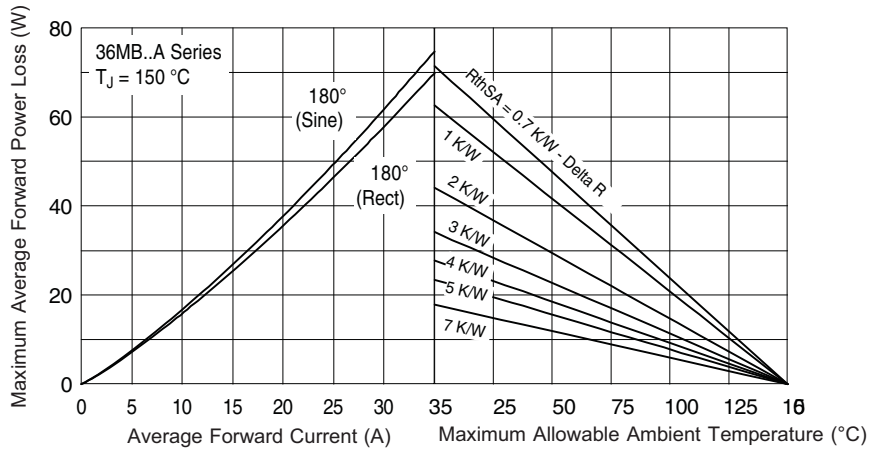


Fig. 8 - Total Power Loss Characteristics

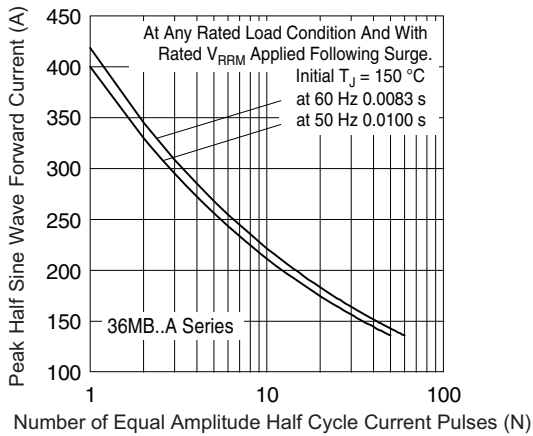


Fig. 9 - Maximum Non-Repetitive Surge Current

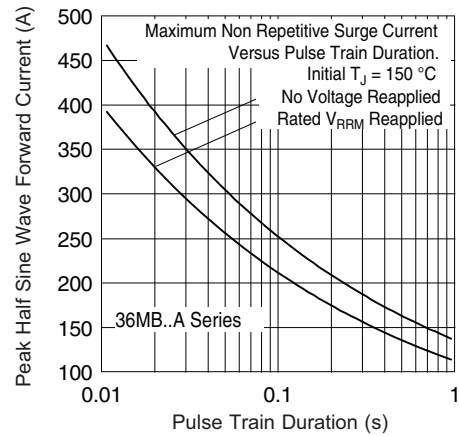
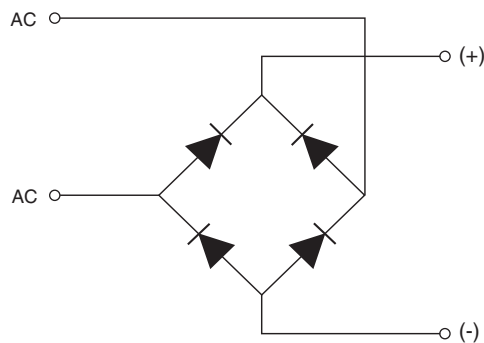


Fig. 10 - Maximum Non-Repetitive Surge Current

ORDERING INFORMATION TABLE

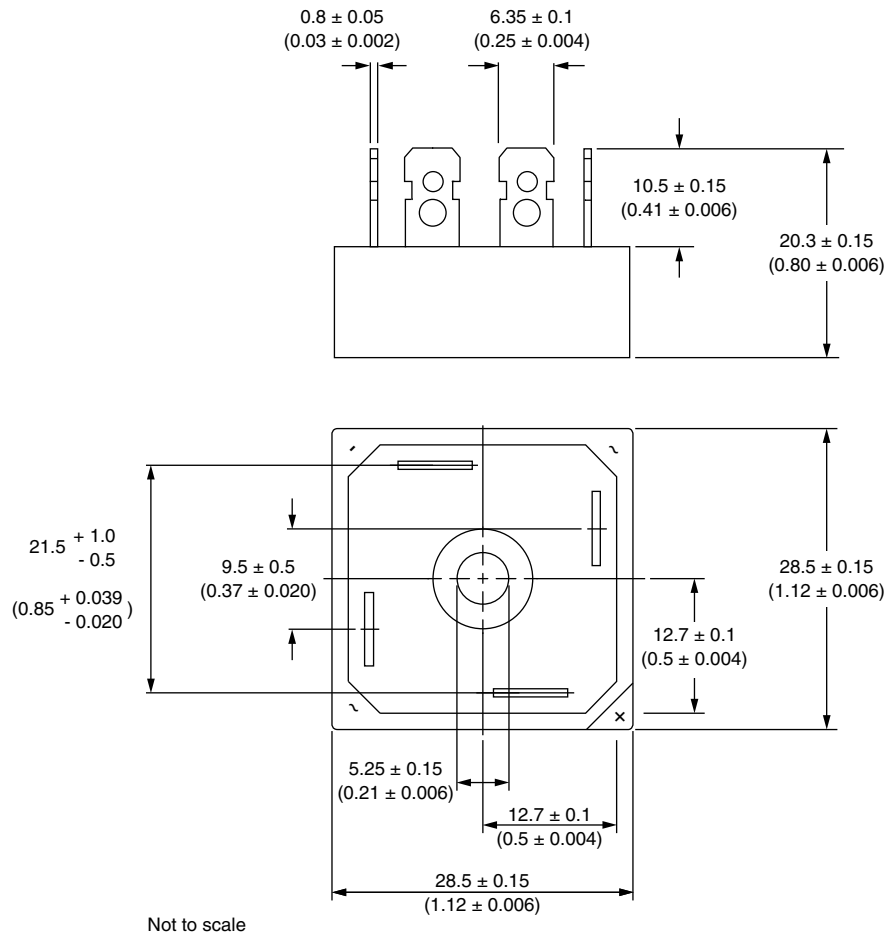
Device code	VS-	36	MB	120	A
	①	②	③	④	⑤
①	-	Vishay Semiconductors product			
②	-	Current rating code		26 = 25 A (average) 36 = 35 A (average)	
③	-	Circuit configuration:			
		MB = Single phase european coding			
④	-	Voltage code x 10 = V_{RRM}			
⑤	-	Diode bridge rectifier:			
		A = 26 MB, 36 MB series			

CIRCUIT CONFIGURATION

LINKS TO RELATED DOCUMENTS

Dimensions	www.vishay.com/doc?95326
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D-34

DIMENSIONS in millimeters (inches)



Suggested plugging force:
200 N max; axially applied to fast-on terminals



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