

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


**MB**
**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 to 275 °C
- RoHS compliant
- Designed and qualified for industrial level


**RoHS**  
COMPLIANT

**PRODUCT SUMMARY**

$I_{T(AV)}$	25/35 A
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**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.

**MAJOR RATINGS AND CHARACTERISTICS**

SYMBOL	CHARACTERISTICS	26MB-A	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 <sup>2</sup> 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		26MB-A	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					
Maximum $I^2t$ for fusing	$I^2t$	t = 10 ms	No voltage reapplied	Initial $T_J = T_J$ maximum	790	1130	A <sup>2</sup> s
		t = 8.3 ms					
		t = 10 ms	100 % $V_{RRM}$ reapplied		560	800	
		t = 8.3 ms					
Maximum $I^2\sqrt{t}$ for fusing	$I^2\sqrt{t}$	$I^2t$ for time $t_x = I_2\sqrt{t} \times \sqrt{t_x}$ ; $0.1 \leq t_x \leq 10$ ms, $V_{RRM} = 0$ V		5.6	11.3	$kA^2\sqrt{s}$	
Low level value of threshold voltage	$V_{F(TO)1}$	$(16.7\% \times \pi \times I_{F(AV)}) < I < \pi \times I_{F(AV)}$ , $T_J$ maximum		0.76	0.79	V	
High level value of threshold voltage	$V_{F(TO)2}$	$I > \pi \times I_{F(AV)}$ , $T_J$ maximum		0.92	0.96		
Low level forward slope resistance	$r_{t1}$	$(16.7\% \times \pi \times I_{F(AV)}) < I < \pi \times I_{F(AV)}$ , $T_J$ maximum		6.8	5.8	mΩ	
High level forward slope resistance	$r_{t2}$	$I > \pi \times I_{F(AV)}$ , $T_J$ maximum		5.0	4.5		
Maximum forward voltage drop	$V_{FM}$	$T_J = 25$ °C, $I_{FM} = 40$ A <sub>pk</sub> (26MB)		1.11	1.14	V	
		$T_J = 25$ °C, $I_{FM} = 55$ A <sub>pk</sub> (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		26MB-A	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



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

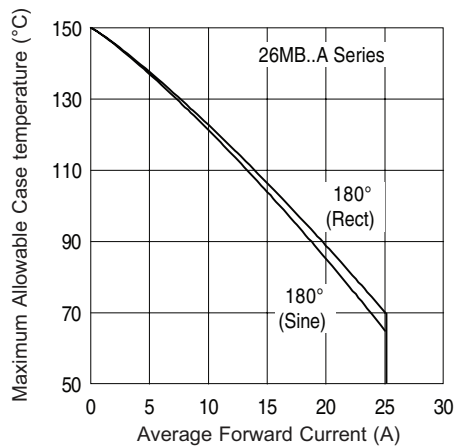


Fig. 1 - Current Ratings Characteristics

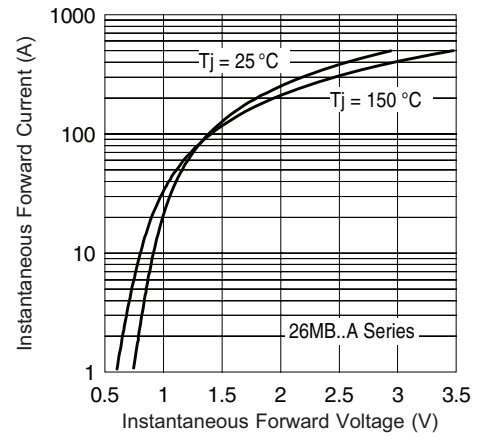


Fig. 2 - Forward Voltage Drop Characteristics  
Maximum Allowable Ambient Temperature

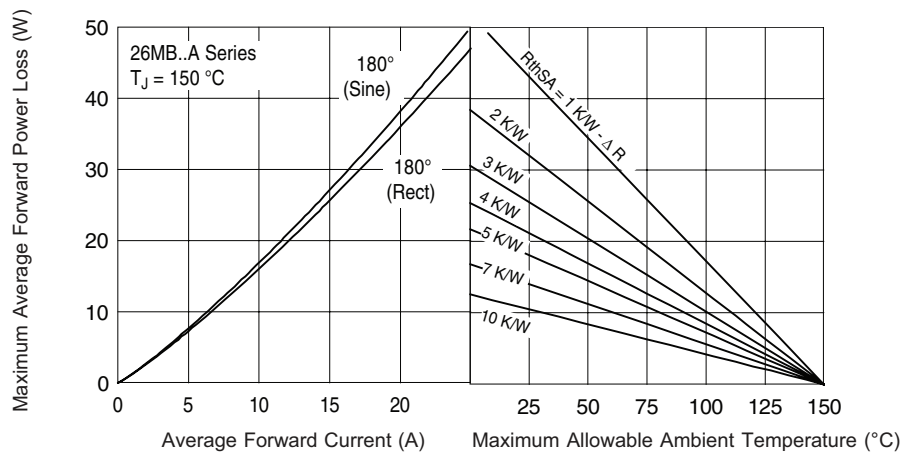


Fig. 3 - Total Power Loss Characteristics

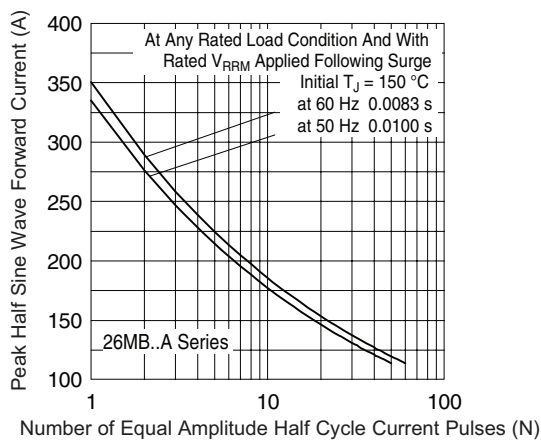


Fig. 4 - Maximum Non-Repetitive Surge Current

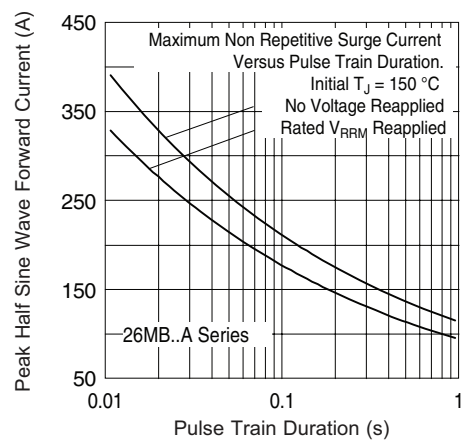


Fig. 5 - Maximum Non-Repetitive Surge Current

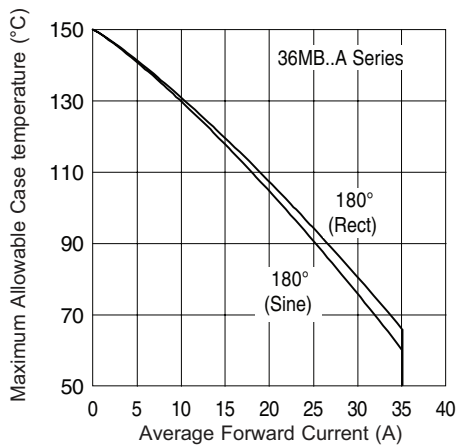


Fig. 6 - Current Ratings Characteristics

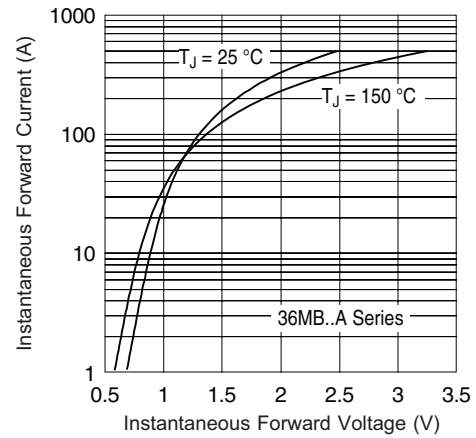


Fig. 7 - Forward Voltage Drop Characteristics

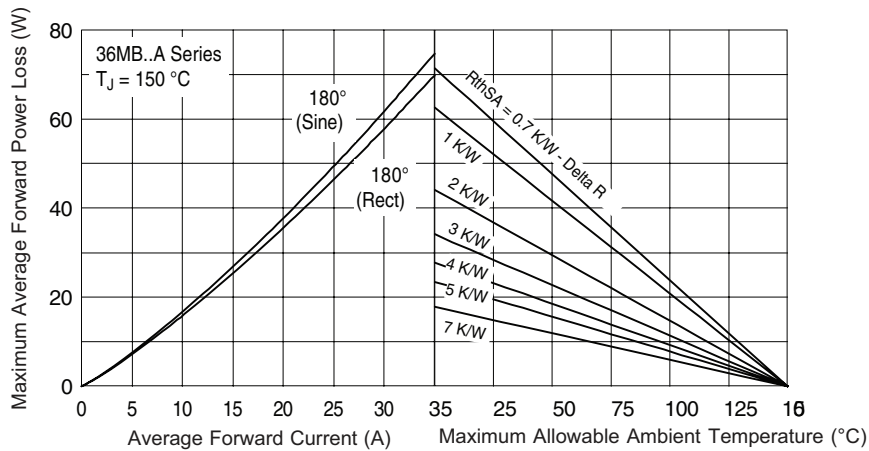


Fig. 8 - Total Power Loss Characteristics

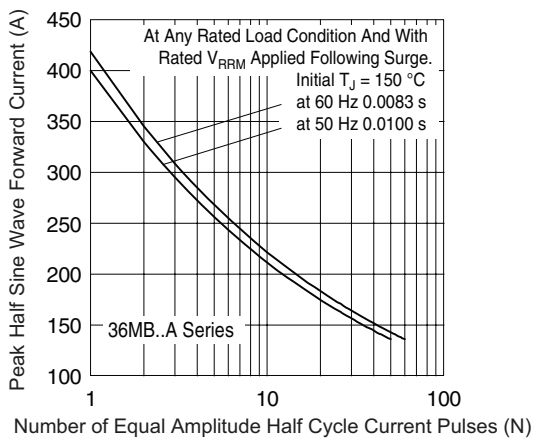


Fig. 9 - Maximum Non-Repetitive Surge Current

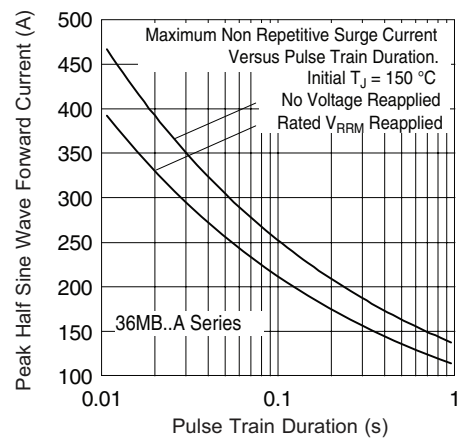
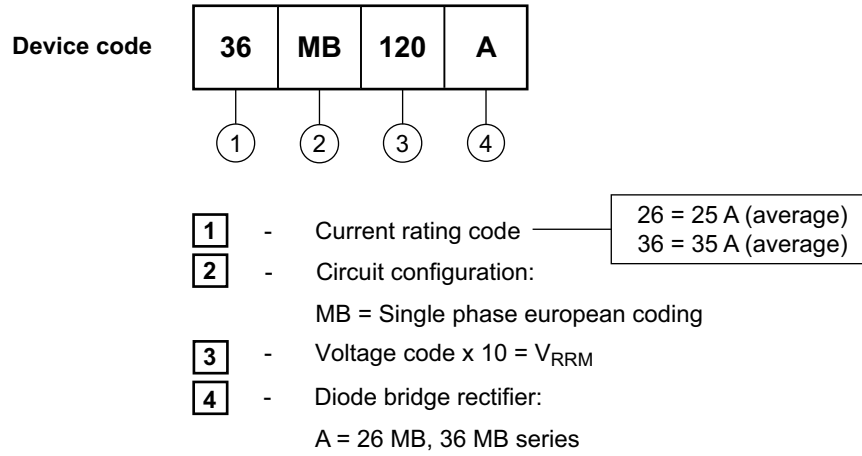
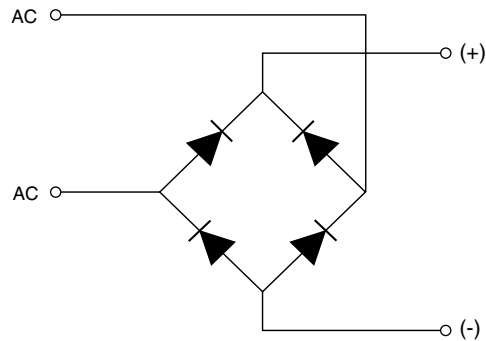


Fig. 10 - Maximum Non-Repetitive Surge Current

## ORDERING INFORMATION TABLE



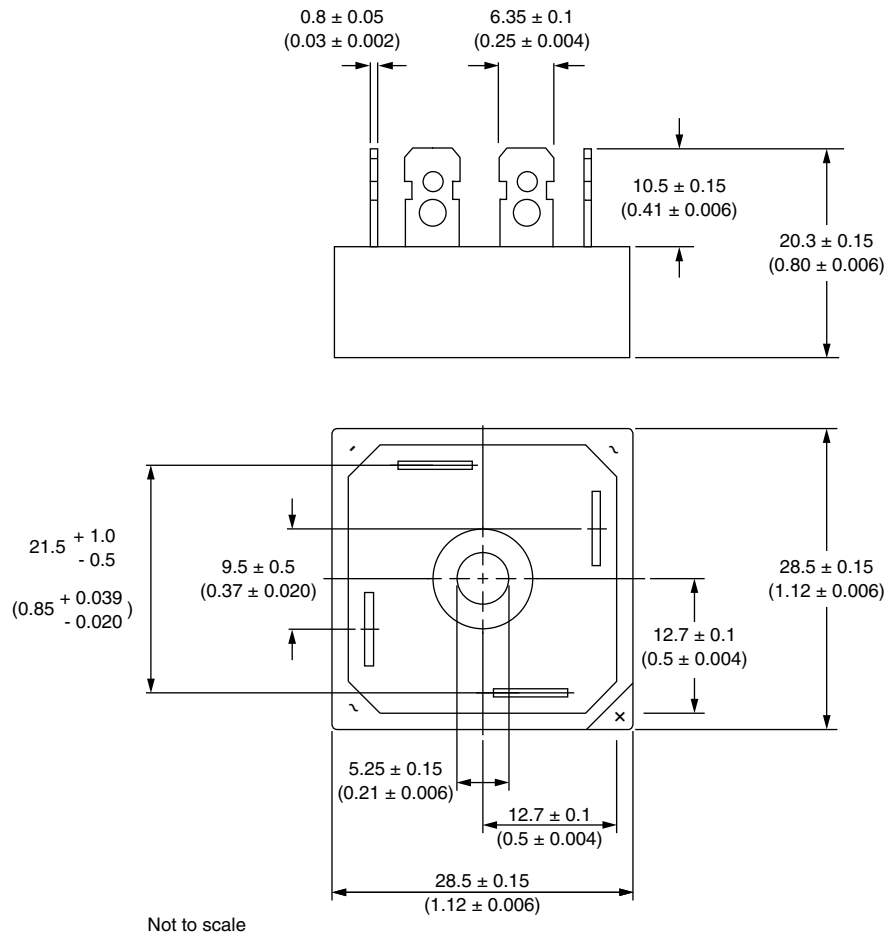
## CIRCUIT CONFIGURATION



LINKS TO RELATED DOCUMENTS	
Dimensions	<a href="http://www.vishay.com/doc?95326">http://www.vishay.com/doc?95326</a>

## D-34

**DIMENSIONS** in millimeters (inches)



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



## Disclaimer

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