


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



D-34

### 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
- UL E300359 approved 
- RoHS compliant
- Designed and qualified for industrial and consumer level



**RoHS**  
COMPLIANT

### PRODUCT SUMMARY

$I_o$	25 A/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
	$T_c$	70	55	°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	1400 to 1600	1400 to 1600	V
$T_J$		- 55 to 150	- 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
26MB..A	140	1400	1500	2
36MB..A	160	1600	1700	

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			350	420	
Maximum $I^2t$ for fusing	$I^2t$	t = 10 ms	No voltage reapplied		790	1130	A <sup>2</sup> s
		t = 8.3 ms					
		t = 10 ms	100 % $V_{RRM}$ reapplied		560	800	
		t = 8.3 ms			512	730	
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 <sup>2</sup> √s	
Low level of threshold voltage	$V_{F(TO)1}$	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)})$ , $T_J$ maximum		0.70	0.74	V	
High level of threshold voltage	$V_{F(TO)2}$	$(I > \pi \times I_{F(AV)})$ , $T_J$ maximum		0.75	0.79		
Low level forward slope resistance	$r_{t1}$	$(16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)})$ , $T_J$ maximum		7.0	5.5	mΩ	
High level forward slope resistance	$r_{t2}$	$(I > \pi \times I_{F(AV)})$ , $T_J$ maximum		6.4	5.2		
Maximum forward voltage drop	$V_{FM}$	$T_J = 25$ °C, $I_{FM} = 40$ Apk (26MB)		$t_p = 400$ μs	1.25	1.3	V
		$T_J = 25$ °C, $I_{FM} = 55$ Apk (36MB)					
Maximum DC reverse current per diode	$I_{RRM}$	$T_J = 25$ °C, at $V_{RRM}$		10	10	μA	
RMS isolation voltage base plate	$V_{ISOL}$	f = 50 Hz, t = 1 s		2700	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	1.35	K/W
Maximum thermal resistance, case to heatsink	$R_{thCS}$	Mounting surface, smooth, flat and greased		0.2		
Mounting torque ± 10 %		Bridge to heatsink		2.0		Nm
Approximate weight				20		g



# MB High Voltage Series

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

Vishay High Power Products

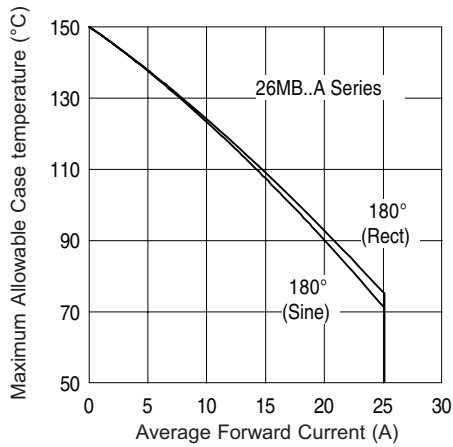


Fig. 1 - Current Ratings Characteristics

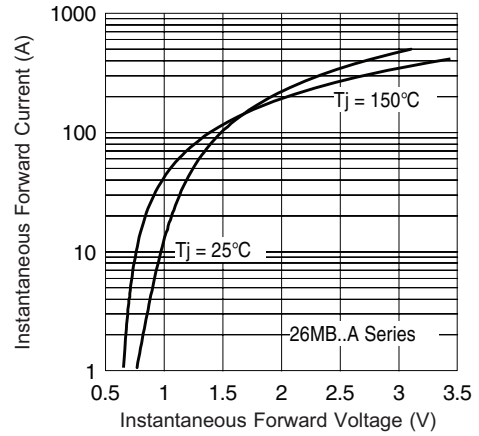


Fig. 2 - Forward Voltage Drop Characteristics

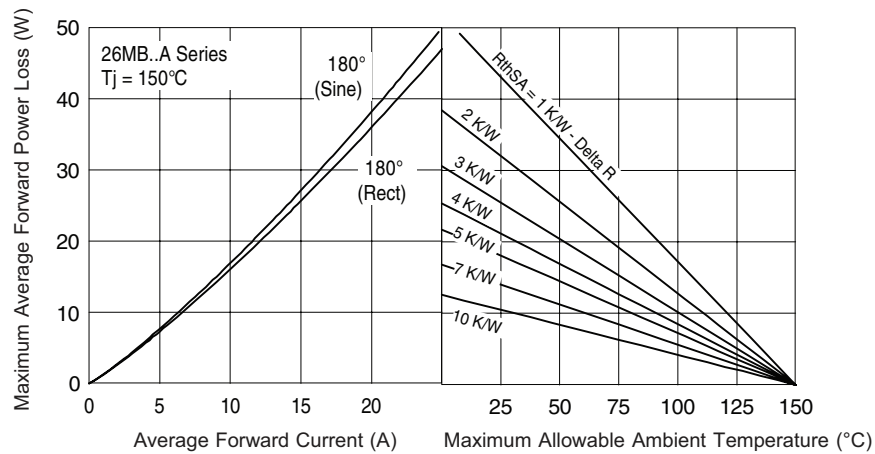


Fig. 3 - Total Power Loss Characteristics

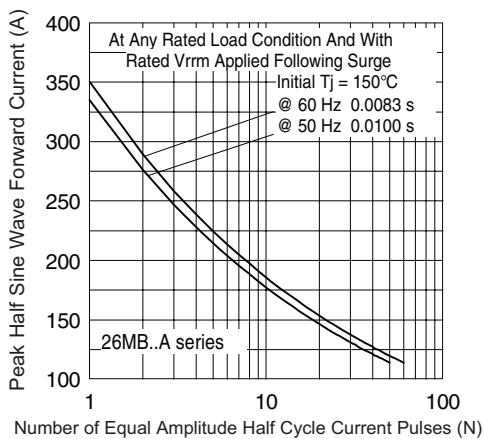


Fig. 4 - Maximum Non-Repetitive Surge Current

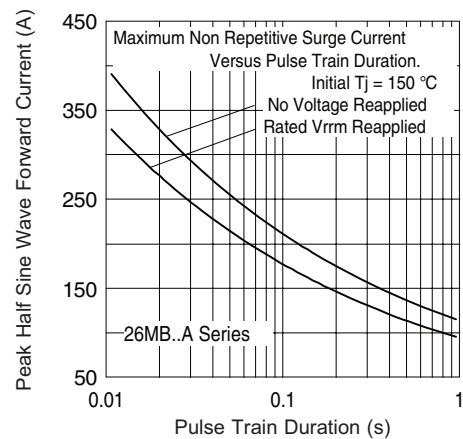


Fig. 5 - Maximum Non-Repetitive Surge Current

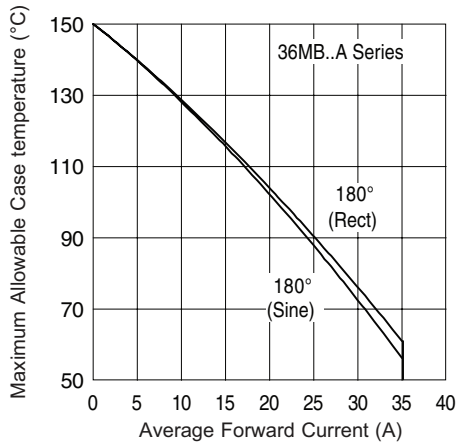


Fig. 6 - Current Ratings Characteristics

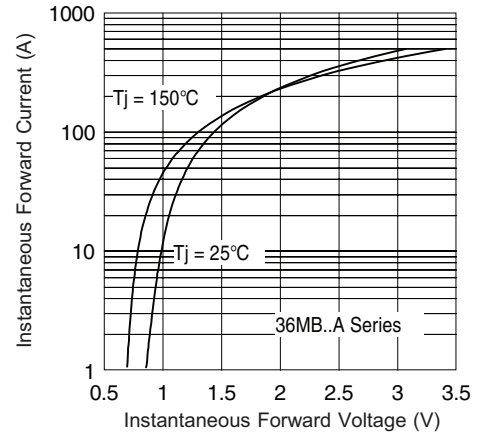


Fig. 7 - Forward Voltage Drop Characteristics

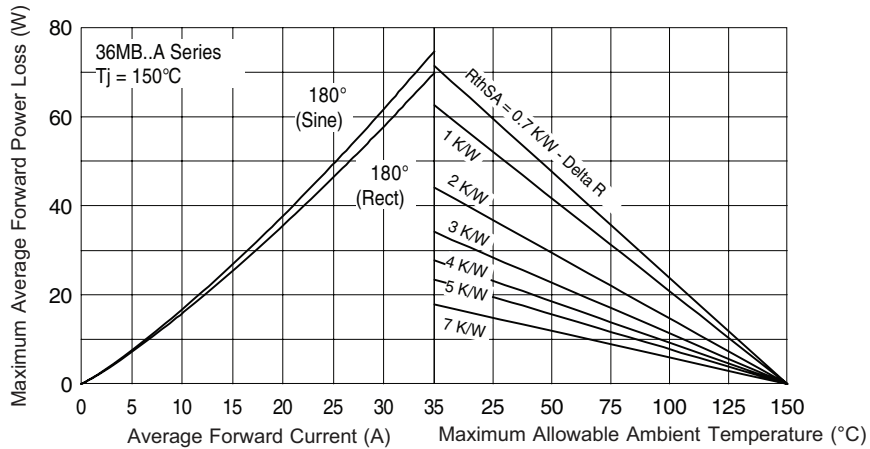


Fig. 8 - Total Power Loss Characteristics

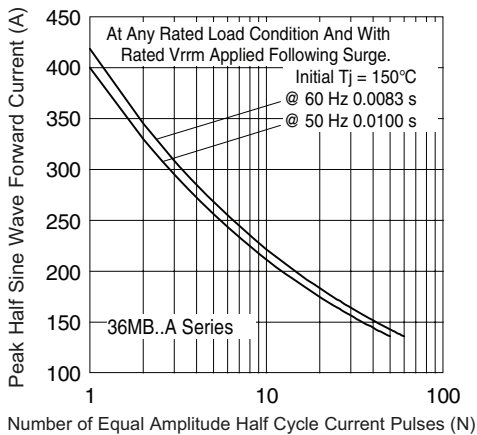


Fig. 9 - Maximum Non-Repetitive Surge Current

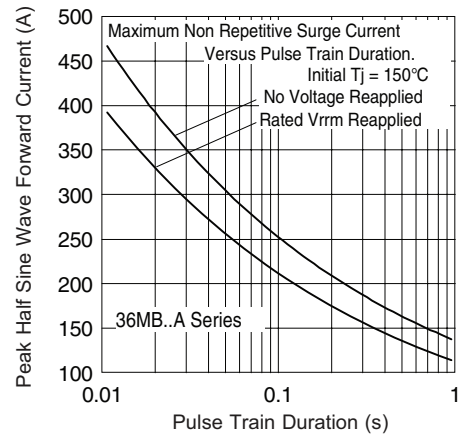
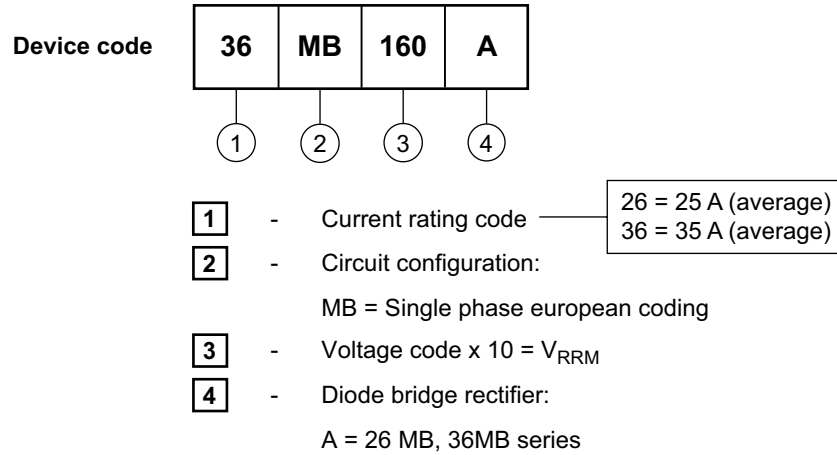


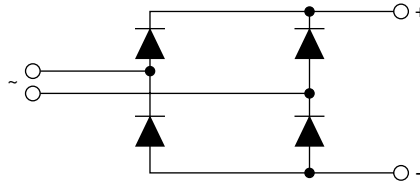
Fig. 10 - Maximum Non-Repetitive Surge Current



## 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>



## Disclaimer

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