


## 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)		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

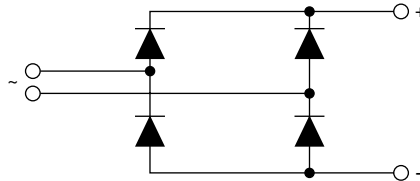
## ORDERING INFORMATION TABLE

Device code	<b>36</b>	<b>MB</b>	<b>160</b>	<b>A</b>
	①	②	③	④

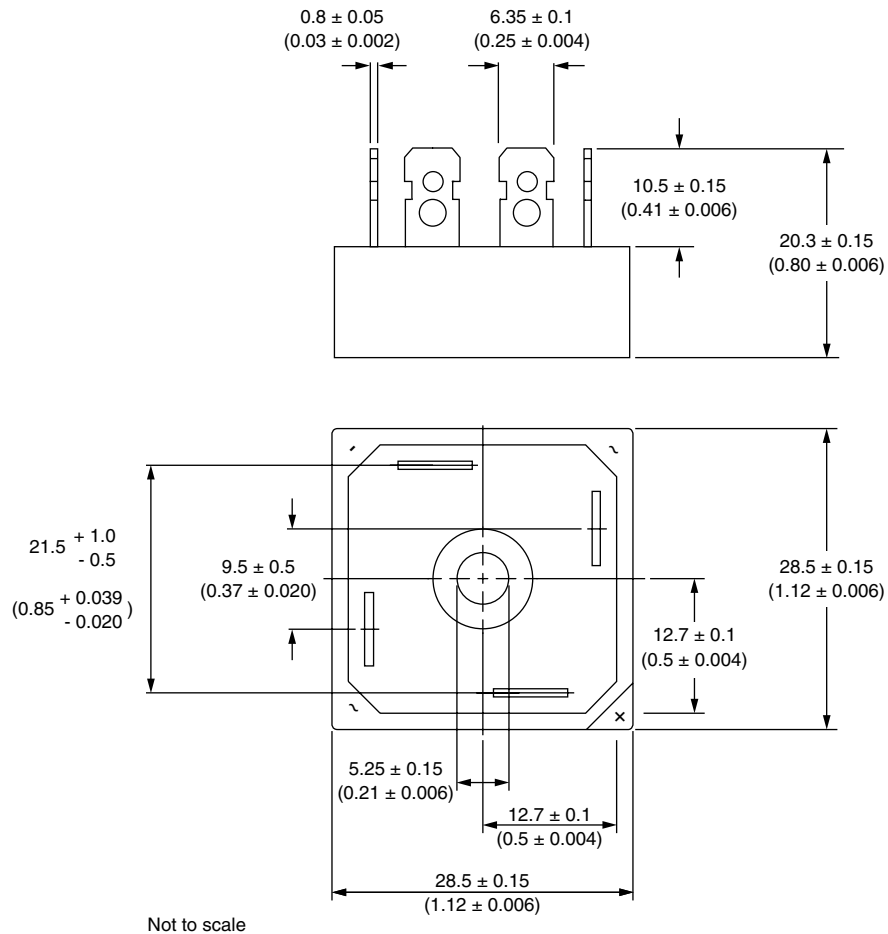
<b>1</b>	-	Current rating code	26 = 25 A (average) 36 = 35 A (average)
<b>2</b>	-	Circuit configuration:	
		MB = Single phase european coding	
<b>3</b>	-	Voltage code x 10 = $V_{RRM}$	
<b>4</b>	-	Diode bridge rectifier:	
		A = 26 MB, 36MB series	

## CIRCUIT CONFIGURATION



## D-34

**DIMENSIONS** in millimeters (inches)



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