

**More power,  
less package!**

# Rectifier Diodes **Wespack**

May 2010 Issue 3

Introducing new Rectifier Diodes using the innovative slimline **Wespack™** housing.

Two of the new devices are available in the 38mm Ø pole face housing, one in the 50mm Ø pole face housing.

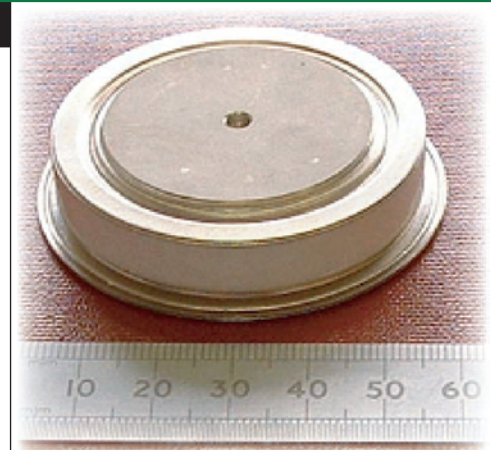
Option for voltages up to 2.8kV.

Voltage  $V_{RRM}$   
from 500V to 2.8kV

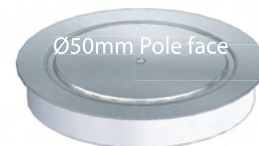
## Summary Table

Part No.	$V_{RRM}$	$I_{FAV}$	$I_{FSM}$	$I^2t$	$V_{T0}$	$r_T$	$T_{JM}$	$R_{thJK}$		Pole Face (mm)	Device Height (mm)
	V	A	A	10ms ½ sine $V_R \leq 60\% V_{RRM}$ A <sup>2</sup> s	@ $T_{JM}$ V	mΩ	°C	180° Sine K/W	120° Rect. K/W		
W3455QK200	2000	3455	20000	$2.0 \times 10^6$	0.940	0.139	180	0.0170	0.0207	38	14
W3455QK220	2200	3455	20000	$2.0 \times 10^6$	0.940	0.139	180	0.0170	0.0207	38	14
W3864QK100	1000	3864	22200	$2.46 \times 10^6$	0.940	0.109	180	0.0170	0.0207	38	14
W3864QK140	1400	3864	22200	$2.46 \times 10^6$	0.940	0.109	180	0.0170	0.0207	38	14
W3864QK180	1800	3864	22200	$2.46 \times 10^6$	0.940	0.109	180	0.0170	0.0207	38	14
W4693QK050	500	4693	31500	$4.98 \times 10^6$	0.904	0.057	180	0.0170	0.0207	38	14
W4693QK080	800	4693	31500	$4.98 \times 10^6$	0.904	0.057	180	0.0170	0.0207	38	14
W5334MK200	2000	5334	46800	$10.95 \times 10^6$	0.892	0.069	180	0.0130	0.0149	50	14
W5334MK220	2200	5334	46800	$10.95 \times 10^6$	0.892	0.069	180	0.0130	0.0149	50	14

*For other voltage classes and current ratings, please contact the Chippenham Factory.*

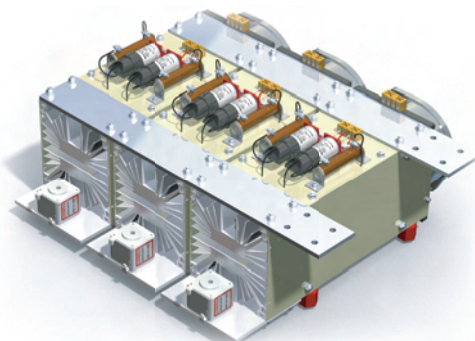


*Maximum power rating  
for weight and volume  
without compromising  
on quality and reliability*



## Features and Benefits

14mm Low Profile  
Rectifier Diode Wespacks  
will be available in the  
four outlines currently offered  
in our Phase Control Thyristor  
**Wespack™** range.



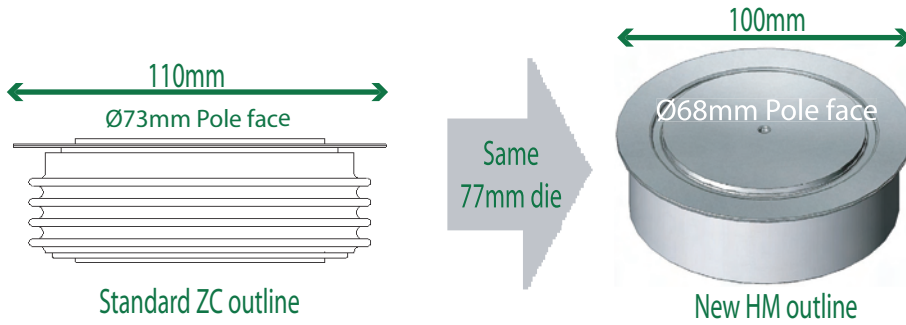
## Applications

- Typical applications include:
- Input rectifiers and bridges
  - Welding
  - DC power supplies
  - Chemical power supplies
  - Battery Chargers

# Rectifier Diode **Wespack™** Housings for higher voltages

The new device forms an extension to the revolutionary **Wespack™** housing, offering the maximum rating in the smallest footprint. The rectifier diode has maximum voltage rating of 3.5kV with an RMS current of 8678A and is encapsulated in a 68mm pole face hermetic pressure contact package.

Offered in two voltage grades:  
W4713HM300 with VRRM=3000V  
and  
W4713HM350 with VRRM=3500V.



The new package has an industry standard 100mm overall diameter, but with a larger 68mm diameter contact area. When compared to conventionally packaged devices of the same overall dimensions the new device presents 23% more current rating in the same volume.

*Fits in the profile of a standard 63mm Ø pole face VC housing allowing retrofit equipment upgrades.*

## Summary Table

Type	V <sub>R<sub>RRM</sub></sub>	I <sub>FAV</sub> T <sub>K</sub> =55°C	I <sub>FSM</sub> 10ms ½ sine V <sub>R</sub> ≤60% V <sub>RRM</sub>	I <sup>2</sup> t	V <sub>TO</sub> @T <sub>JM</sub>	r <sub>T</sub>	T <sub>JM</sub>	R <sub>thJK</sub>		Ø	Height
Part No.	V	A	A	A <sup>2</sup> s	V	mΩ	°C	180° Sine K/W	120° Rect. K/W	Pole Face	
W4713HL300	3000	4713	56000	15.7 x 10 <sup>6</sup>	0.807	0.090	160	0.0120	0.0132	68mm	26mm
W4713HL350	3500	4713	56000	15.7 x 10 <sup>6</sup>	0.807	0.090	160	0.0120	0.0132	68mm	26mm
W4713HM300	3000	4713	56000	15.7 x 10 <sup>6</sup>	0.807	0.090	160	0.0120	0.0132	68mm	33mm
W4713HM350	3500	4713	56000	15.7 x 10 <sup>6</sup>	0.807	0.090	160	0.0120	0.0132	68mm	33mm

## Features

- Maximum power rating for weight and volume without compromising on quality and reliability
- Further voltage options; V<sub>RRM</sub> up to 4.8kV
- Two profile options; 26mm (HL) and 33mm (HM)

## Applications

- Traction Sub Stations
- Input rectifiers and bridges
- DC power supplies
- Utilities
- Chemical power supplies



Certificate FM26085

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