

**Maximum Power,
Minimum Weight
& Volume!**

Wespack™ Phase Control Thyristors

May 2011 Issue 7

Features and Benefits

Introducing two new package options to the **Wespack™** phase control thyristor range. The new devices offer the same maximised power ratings for weight and volume, but in an industry standard 26mm thick package.

These new 26mm thick package options augment Westcode's extensive range of 14.5mm thick 'Wespack™' devices. The new product matrix includes four voltage classes from 600V to 2.2kV and average current rating from 1449A to 3597A. The new packages maximise silicon content and therefore controllable power, while fitting within the envelope of industry standard outlines. However, the increased package thickness gives an enhanced minimum creep distance of 12mm anode to gate, as well as an increased flash distance when mounted between flat coolers.

Where as the 14.5mm **Wespack™** package offers the best current rating for volume and lowest material content, the new 26mm devices are ideal in environments where an increased creep distance is a significant requirement. The new packages have the same die, but the thicker package increases the thermal resistance to give a slightly lower average current rating; however these remain significantly greater than those of alternative packaging technologies within the same envelope.



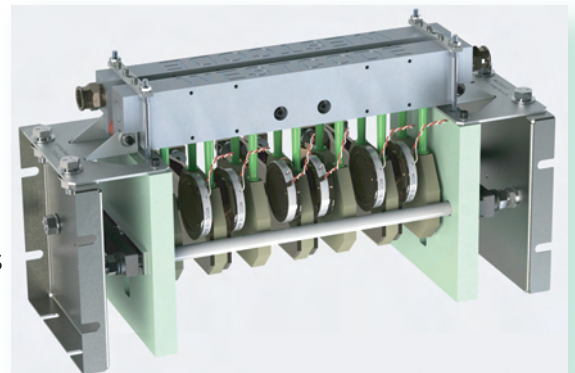
- Fully Hermetic Press-pack
- Maximum current rating and lowest thermal impedance for package size.
- Improved diffusion profile to maximise performance
- Compatible with existing mechanical designs

Applications



Typical Applications include:

- Soft-starts
- Industrial Drives
- Wind Power Converters
- Electrochemical Power Supplies
- Welding



Summary Table

New	Type Part No.	V_{DRM}	I_{TAV}	I_{TSM}	I^2t	V_{TO}	r_T	T_{JM}	R_{thJC}	Fig. No.
		V_{RRM} V	$T_C=55^\circ C$ A	10ms A	10ms A^2s	@ T_{JM} V	$m\Omega$	$^\circ C$	180° K/W	
	N1174JK200	2000	1174	13200	870×10^3	1.000	0.416	125	0.0270	WP1
	N1174JK220	2200	1174	13200	870×10^3	1.000	0.416	125	0.0270	WP1
	N1263JK160	1600	1263	15000	1.13×10^6	1.015	0.332	125	0.0270	WP1
	N1263JK180	1800	1263	15000	1.13×10^6	1.015	0.332	125	0.0270	WP1
	N1366JK080	800	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	WP1
	N1366JK120	1200	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	WP1
	N1366JK140	1400	1366	15900	1.26×10^6	0.985	0.270	125	0.0270	WP1
#	N1449QL200	2000	1449	17300	1.50×10^6	1.060	0.317	125	0.022	WP5
#	N1449QL220	2200	1449	17300	1.50×10^6	1.060	0.317	125	0.022	WP5
#	N1581QL160	1600	1581	19100	1.82×10^6	1.022	0.253	125	0.022	WP5
#	N1581QL180	1800	1581	19100	1.82×10^6	1.022	0.253	125	0.022	WP5
	N1651QK200	2000	1651	17300	1.50×10^6	1.060	0.317	125	0.0180	WP2
	N1651QK220	2200	1651	17300	1.50×10^6	1.060	0.317	125	0.0180	WP2
	N1806QK160	1600	1806	19100	1.82×10^6	1.022	0.253	125	0.0180	WP2
	N1806QK180	1800	1806	19100	1.82×10^6	1.022	0.253	125	0.0180	WP2
#	N1817QL120	1200	1817	22000	2.42×10^6	0.955	0.177	125	0.022	WP5
#	N1817QL140	1400	1817	22000	2.42×10^6	0.955	0.177	125	0.022	WP5
	N2083QK080	800	2083	22000	2.42×10^6	0.955	0.177	125	0.0180	WP2
	N2083QK120	1200	2083	22000	2.42×10^6	0.955	0.177	125	0.0180	WP2
	N2083QK140	1400	2083	22000	2.42×10^6	0.955	0.177	125	0.0180	WP2
#	N2015ML200	2000	2015	32400	5.25×10^6	0.883	0.210	125	0.0180	WP6
#	N2015ML220	2200	2015	32400	5.25×10^6	0.883	0.210	125	0.0180	WP6
	N2154JK020	200	2154	22700	2.58×10^6	0.890	0.107	140	0.0270	WP1
	N2154JK040	400	2154	22700	2.58×10^6	0.890	0.107	140	0.0270	WP1
	N2154JK060	600	2154	22700	2.58×10^6	0.890	0.107	140	0.0270	WP1
#	N2191ML160	1600	2191	34500	5.95×10^6	0.940	0.154	125	0.0180	WP6
#	N2191ML180	1800	2191	34500	5.95×10^6	0.940	0.154	125	0.0180	WP6
	N2367MK200	2000	2367	32400	5.25×10^6	0.883	0.210	125	0.0140	WP3
	N2367MK220	2200	2367	32400	5.25×10^6	0.883	0.210	125	0.0140	WP3
#	N2520ML040	400	2520	38200	7.30×10^6	0.981	0.090	125	0.0180	WP6
#	N2520ML120	1200	2520	38200	7.30×10^6	0.981	0.090	125	0.0180	WP6
#	N2520ML140	1400	2520	38200	7.30×10^6	0.981	0.090	125	0.0180	WP6
	N2593MK160	1600	2593	34500	5.95×10^6	0.940	0.154	125	0.0140	WP3
	N2593MK180	1800	2593	34500	5.95×10^6	0.940	0.154	125	0.0140	WP3
#	N2783QL020	200	2783	28000	3.92×10^6	0.926	0.067	140	0.022	WP5
#	N2783QL040	400	2783	28000	3.92×10^6	0.926	0.067	140	0.022	WP5
#	N2783QL060	600	2783	28000	3.92×10^6	0.926	0.067	140	0.022	WP5
	N3022MK080	800	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	WP3
	N3022MK120	1200	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	WP3
	N3022MK140	1400	3022	38200	7.30×10^6	0.981	0.090	125	0.0140	WP3
	N3229QK020	200	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	WP2
	N3229QK040	400	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	WP2
	N3229QK060	600	3229	28000	3.92×10^6	0.926	0.067	140	0.0180	WP2
#	N3597ML020	200	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	WP6
#	N3597ML040	400	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	WP6
#	N3597ML060	600	3597	45400	10.3×10^6	0.840	0.053	140	0.0180	WP6
	N3904HK200	2000	3904	50900	12.95×10^6	0.920	0.111	125	0.0090	WP4
	N3904HK220	2200	3904	50900	12.95×10^6	0.920	0.111	125	0.0090	WP4
	N4316MK020	200	4316	45400	10.3×10^6	0.840	0.053	140	0.0140	WP3
	N4316MK040	400	4316	45400	10.3×10^6	0.840	0.053	140	0.0140	WP3
	N4316MK060	600	4316	45400	10.3×10^6	0.840	0.053	140	0.0140	WP3
	N4472HK160	1600	4472	59000	17.40×10^6	0.986	0.068	125	0.0090	WP4
	N4472HK180	1800	4472	59000	17.40×10^6	0.986	0.068	125	0.0090	WP4
	N6974HK020	200	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	WP4
	N6974HK040	400	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	WP4
	N6974HK060	600	6974	65000	21.13×10^6	0.853	0.029	140	0.0090	WP4

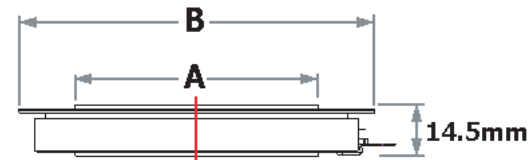
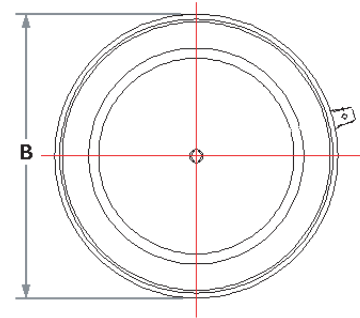


Fig. No.	A mm	B mm
WP1	32	50.55
WP2	38	59.5
WP3	50	74
WP4	68	100

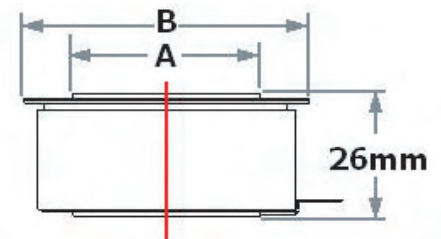


Fig. No.	A mm	B mm
WP5	38	59.5
WP6	50	74



New Products

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