



## Microsemi Launches New Line of Three-Level Inverter Power Modules for Solar Converters

IRVINE, Calif., May 28, 2009 (GlobeNewswire via COMTEX News Network) -- Microsemi Corporation (Nasdaq:MSCC) a leading manufacturer of high performance analog mixed signal integrated circuits and high reliability semiconductors, has launched a new line of 20 standard three-level inverter power modules designed for solar converter applications.

"The introduction of these 20 three-level inverter power modules provides a wide range of solutions in terms of technologies and power ratings for solar inverter manufacturers," said Philippe Dupin, Director, Power Module Products, Power Products Group located in Bordeaux, France. "With very low profile and minimum parasitics these modules can enable very compact systems and the highest possible efficiencies, particularly if SiC diodes are used as replacements of FREDs," he added.

The standard modules are available in 600V and 1200V voltage for full IGBT configuration and in 600V and 900V for a mix of MOSFET and IGBT technology. Each module integrates a leg of the inverter such that three identical modules are used to achieve a 3-phase solar inverter. The modules are available in SP1, SP3 and SP6 packages.

Most of the 600V IGBT devices are offered with Trench and Field stop technology. Current specifications vary from 20A to 300A. Modules with current rating from 20A to 50A are integrated in SP1 and SP3 packages. Modules in SP1 packages offer a low-cost solution while equivalent modules in SP3 provide optional features such as an NTC thermistor for temperature monitoring and improved Kelvin connections for easier drive power devices.

The SP3 module range extends to 100A/600V and is also offered in 1200V with 60A current. At the high current end, standard modules with 150A, 200A and 300A currents are specified in the larger SP6 package with screw terminals.

Should the specified operating frequency be higher than 20 kHz, fast NPT IGBT modules are offered at 30A in SP1 and SP3 and 50A in SP3 to meet aggressive efficiency targets.

IGBT three-level inverter standard power modules:

VCES (V)	Technology	IC (A) Tc=80 C	Vce(on) (V) at rated Ic	Package	NTC	Part Number
600	TRENCH	300	1.5	SP6	N/A	APTGT300TL60G
		200	1.5	SP6	N/A	APTGT200TL60G
		150	1.5	SP6	N/A	APTGT150TL60G
		100	1.5	SP3	YES	APTGT100TL60T3G
		75	1.5	SP3	YES	APTGT75TL60T3G
		50	1.5	SP3	YES	APTGT50TL60T3G
		50	1.5	SP1	N/A	APTGT50TL601G
		30	1.5	SP3	YES	APTGT30TL60T3G
		30	1.5	SP1	N/A	APTGT30TL601G
		20	1.5	SP3	YES	APTGT20TL60T3G



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		20	1.5	SP1	N/A	APTGT20TL601G
NPT fast		50	2.1	SP3	YES	APTGF50TL60T3G
		30	2.1	SP3	YES	APTGF30TL60T3G
		30	2.1	SP1	N/A	APTGF30TL601G
1200	TRENCH 4	60	1.85	SP3	YES	APTGL60TL120T3G

Standard modules can be provided with a mix of MOSFET devices to operate at high frequency and Trench and Field stop IGBTs for low conduction losses. Such topologies reach unbeatable efficiency goals. 600V Super junction transistors with R<sub>dson</sub> of 99 mOhms, 70 mOhms and 45 mOhms are combined with respectively 30A, 50A and 75A Trench and Field Stop IGBTs. A module with 900V/120 mOhms Super Junction transistors combined with 1200V Trench IGBTs is available, should 600V devices prove insufficient in given systems. The modules exhibit two diodes across the output to meet requirements of reactive energy specifications.

MOSFET/IGBT three-level inverter standard power modules:

VCES (V)	Technology Mix	R <sub>dson</sub> CoolMOS (mOhms)	V <sub>ce(on)</sub> IGBT (V) at rated I <sub>c</sub>	Package	NTC	Part Number
600	CoolMOS/ Trench IGBT	45	1.5/75	SP3	YES	APTCV60TLM45T3G
		70	1.5/50	SP3	YES	APTCV60TLM70T3G
		99	1.5/30	SP3	YES	APTCV60TLM99T3G
		99	1.5/30	SP1	N/A	APTCV60TLM991G
900		120	1.85/50	SP3	YES	APTCV90TL12T3G

Technical data sheets are available on the Microsemi website: [www.microsemi.com](http://www.microsemi.com). Samples are available immediately. Prices range from \$13.88 to \$91.67 in quantities of 1K to 5K.

#### About Microsemi

Microsemi Corporation, with corporate headquarters in Irvine, California, is a leading designer, manufacturer and marketer of high performance analog and mixed-signal integrated circuits and high reliability semiconductors. The company's semiconductors manage and control or regulate power, protect against transient voltage spikes and transmit, receive and amplify signals.

Microsemi's products include individual components as well as integrated circuit solutions that enhance customer designs by improving performance and reliability, battery optimization, reducing size or protecting circuits. The principal markets the company serves include implanted medical, defense/aerospace and satellite, notebook computers, monitors and LCD TVs, automotive and mobile connectivity applications. More information may be obtained by contacting the company directly or by visiting its website at <http://www.microsemi.com>.

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"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: Any statements set forth in this news release that are not entirely historical and factual in nature, including without limitation statements concerning our standard three-level inverter power modules designed for solar converter applications, are forward-looking statements. These forward-looking statements are based on our current expectations and are inherently subject to risks and uncertainties that could

cause actual results to differ materially from those expressed in the forward-looking statements. The potential risks and uncertainties include, but are not limited to, such factors as rapidly changing technology and product obsolescence, potential cost increases, variations in customer order preferences, weakness or competitive pricing environment of the marketplace, uncertain demand for and acceptance of the company's products, adverse circumstances in any of our end markets, results of in-process or planned development or marketing and promotional campaigns, difficulties foreseeing future demand, potential non-realization of expected orders or non-realization of backlog, product returns, product liability, and other potential unexpected business and economic conditions or adverse changes in current or expected industry conditions, difficulties and costs of protecting patents and other proprietary rights, inventory obsolescence and difficulties regarding customer qualification of products. In addition to these factors and any other factors mentioned elsewhere in this news release, the reader should refer as well to the factors, uncertainties or risks identified in the company's most recent Form 10-K and all subsequent Form 10-Q reports filed by Microsemi with the SEC. Additional risk factors may be identified from time to time in Microsemi's future filings. The forward-looking statements included in this release speak only as of the date hereof, and Microsemi does not undertake any obligation to update these forward-looking statements to reflect subsequent events or circumstances.

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