CUSTOMER NEWSLETTER

Acme Electric – Magnetics – Most people don't know that the first toroid patent dates back to 1884; however, it is only in the past 30 years that Amveco and its predecessors developed practical manufacturing techniques. The usage of toroids has grown rapidly because of the many features that permit new and innovative product designs. Unlike their E-I counterparts, toroids lend themselves to custom applications because most designs don't need special costly tools such as stamping dies. A strip of high quality grain oriented silicon steel is wound in the shape of a clock spring forming the core of the toroid. To learn more go to the Amveco web site and click on application notes. Amveco is the largest toroid manufacturer in North America. The web site is at www.amveco.com

Advanced Monolythic Ceramics (AMC) – Capacitors – AMC's focus technology for this issue is X2Y®. The X2Y® capacitor products employ a unique patented internal design in which common shielding electrodes form a Faraday cage around traditional capacitor electrodes. This nearly eliminates parasitics and creates two matched capacitors that are immune to temperature, voltage and aging performance differences. Available X2Y® products include planar capacitor arrays, discoidal capacitors and large format chip capacitors. X2Y® products offer many performance advantages including: significantly lower EMI with one component, superior noise suppression, differential and common mode attenuation, match capacitance line to ground on both lines, provide low inductance due to cancellation effect, reduce component count whether filtering or decoupling, reduce space required for passive components and significantly increase operating bandwidth. X2Y® filter products provide optimal filtering and noise suppression solutions for DC motors, broadband filtering, filtered connectors, power line inlet modules, fiber optic and cellular applications. Please visit their web site at: www.amccaps.com

Cambion – Connectors – Cambion recently introduced solder-less RF connectors. These products were designed primarily to be used with semi-rigid cable. The solder-less connection saves time and money. During assembly, prepared semi-rigid cable is plugged into the RF connector and an integral locking cap is screwed down closing the teeth of an inner insert which provides strain relief. No special tooling is required to effect a quick pluggable termination. Currently Cambion offers this style in standard SMA, SMB, MMCX and N footprints. Cambion has invested in state of the art fabrication tooling so RF connectors can be customized to suit specific applications. For more information visit their web site at: www.cambion.com or call your EMA sales rep for samples.

Combat Warrior Sales – Service Disabled Veteran – Combat Warrior Sales is essentially a broker business, but with a slightly different twist. EMA has a minority interest in this company and most of our principals are happy to assist their customers with their set aside mandates. When we deal with these suppliers, we are a business partner and we negotiate pricing at the highest levels of management within those organizations (not an inside sales person quoting column pricing to a broker). This is how we can be competitive with the mega-distributors. We also do something they won't or can't do… stock inventory for our customers. If you have some ugly ducklings that are perpetually shutting down your line, please contact us and we will see if we can help you find a solution. Web site: www.combatwarriorsales.com

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Cosmotronic – Military & commercial bare boards – JR Controls, the parent company, has made some changes. Previously, Cosmotronic was their only solution for flex and as a military operation they were missing out on a lot of commercial and medical flex opportunities because they were not cost effective. Winonics, Cosmotronic's sister company had two facilities which only did rigid and other than some minor technology differences there was little to differentiate the two locations. Both had very good capability in high tech rigid manufacturing. Major capital investments were made in the Fullerton, CA location and it was renamed to Bench2Bench Technology. B2B is a commercial world class flex circuit facility. All three web sites have been completely redesigned and you can effortlessly switch from site to site. The web sites are: www.bench2bench.com www.winonics.com and www.cosmotronic.com

Delphi Connection Systems – Mil/Aero Connectors – If you have applications for military fiber optic cable assembly or even thinking about using it in a design, you may want to consider Delphi as your turnkey source. Delphi has been manufacturing MIL-PRF-28876 connectors for many years. They also offer MIL-PRF-83526 next generation hermaphroditic fiber optic connectors. It is not a trivial matter to terminate fiber, so why not leave it to the experts? They have many other standard fiber products including 29504/4 and /5 termini, 29504/14 and /15 termini as well as snap lock and full custom fiber optic connectors. Please visit their web site at: www.delphi.com/manufacturers/other/connectors

Snap Lock

DFOCA – MIL-PRF-83526

MIL-PRF-28876

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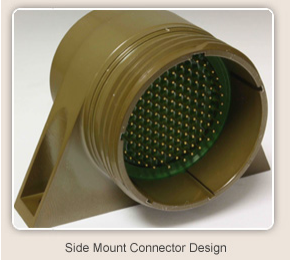
EverSpin – Non-volatile RAM – EverSpin has its roots in Motorola Semiconductor where memory designers had been experimenting with magnetic technologies for decades. Most people know that Motorola became Freescale when their parent spun off the semiconductor division. The research continued at Freescale until the first MRAM device was introduced in 2006. In June 2008 EverSpin was formed. Freescale remains a major investor, but infusions of new cash were needed to bring a full product portfolio to market and continue new technology research. MRAM products are being integrated into other standard and custom applications such as microcontrollers and in spite of what the competition says, it is a very robust technology. Don't be fooled by the competition carrying around their high power magnets to try to confuse people about EverSpin technology. In real life, most applications, except MRI's, would never come close to seeing the magnetic fields capable of altering your data. They will try to muddy up the waters because their technology is much more expensive and they are worried about the market share they are going to lose to MRAM. To learn more about their technology, visit www.everspin.com

Filconn – Filter connectors – Filconn's name is deceiving. It implies that they are only a filter connector manufacturer. Although they do that very well, they are also a connector solution company. If you have a few minutes to browse, it would be a good idea to take a look at the pictures on their web site. They have done many modified standards and you will truly be amazed at some of their products. I will feature one example in this issue. The picture below is a side mounted 38999 Series III (shell size 25) connector. The mounting design was developed in concert with several customers who had a need for a mounted connector and didn't have the luxury of a bulkhead panel. This shell demonstrates the capability of Filconn's machine shop. Keep them in mind for any custom requirements for coax, twinax, triax or quadrax. Custom inserts and layouts can be designed. The web site is: www.filconn.com



Side Mount Connector Design

Isodyne – EMI back shells – The major reasons for looking at Isodyne back shells are: tool-less termination – no expensive tools to buy or calibrate (**field repair ability**), ease of use (**labor savings**), reliability (**no solder sleeves or compression bands failing**) and smaller size (**weight savings**). If you are looking at cost savings on the price of the back shell only and ignoring these factors you will never use an Isodyne back shell. We offer solutions that the competition can't bring you. Isodyne will also do custom back shells for special applications. In most cases there will never be any NRE because they will own the design and will offer it to other customers. Contact EMA or visit: www.isodyneinc.com for more information.

CUSTOMER NEWSLETTER

MagLayers USA – Chip beads & Inductors – For almost 20 years Maglayers has been designing board mounted magnetic components for the Asian market. Their customers include major U.S. companies like Apple Computer, Cisco and Motorola and major Asian customers include Asus, LG and Sony. Unfortunately, since these customers typically buy direct (due to their high volume applications) we have struggled with our lack of presence on a major distributor line card. The bad news is that this trend will likely continue, but the good news is that Maglayers has approved Alfa Electronics as a franchised stocking distributor. Based in Canton, GA this woman owned small business has proven to be a very dependable partner to EMA in the South East and we are looking forward to working with them in supporting our Maglayers customers. Alfa's web site is www.alfaelectronicsltd.com Please check out the newly updated Maglayers site at: www.maglayersusa.com

NDK America – Crystals & Oscillators –NDK Crystal Inc. had an explosion at their Belvidere, IL synthetic quartz manufacturing facility. One of the 8 autoclaves exploded on Dec. 7th killing a driver at a truck stop ¼ mile away. The explosion also caused damage to the offices of sister company NDK America and they have relocated to a temporary office in Schaumburg, IL. The cause of the accident is under investigation but it is assumed to be metal fatigue. The loss of production capacity will not affect NDK America or its customers since they have a large inventory of synthetic quartz and lots of capacity in Sayama, Japan; however, it could affect some competitors who buy product from NDK Crystal Inc. The Belvidere facility is expected to be closed until all investigations are complete and it is deemed safe to restart production. News updates will be posted on the web site as information becomes available. There are two focus products for this newsletter. The first is the NZ2520SF crystal oscillator. This 2.5 x 2.0 x .9 mm device operates at .8V. When coupled with a 40% reduction in current draw this product delivers a 70% reduction in power consumption for extended battery life and potential for a decrease in battery size. It is available in frequencies from 1.5 to 50 MHz and the operating temperature is -40˚ to +85˚C. At 10K pieces the pricing is approximately $.98 each. The other focus part is a new VCXO. The NV7050SA is a 5 x 7 mm oscillator which has a frequency range of 100 to 700 MHz. This device is based on a fundamental crystal rather than using a PLL to get to these high frequencies, so it is very stable and has ultra low phase jitter. Check the web site for complete specs at www.ndk.com

Prototron Circuits – Prototype Bare PCB's – Prototron is a bare board shop that specializes in quick turns prototype orders. They do not typically deal with any level of production business unless it would involve less than 4 panels because it would tie up their production line and affect their ability to process orders quickly. They have however made a name for themselves in the component market place where circuit boards are typically very tiny. This is the only real exception to the production quantity rule. They have developed a lot of expertise in dealing with castellations which are a common feature for these types of designs. Please visit their web site for more information on their capabilities at www.prototron.com

Electronic Marketing Associates, Inc.

CUSTOMER NEWSLETTER

RO Associates – Brick Power Supplies – RO Associates will be releasing their new PFC-650 next month. This ¾ size AC/DC brick power supply is rated at 650W and like most RO products, it will deliver full power if the base plate temperature is maintained at -40˚C to 100˚C. Both -55˚C (with no de-rating) and +125˚C (with de-rating) versions are standard options. The input power is 85 to 264 VAC and output is 380VDC which allows it to power multiple MicroVerter® and single MegaVerter® series modules. Also available will be a version with paralleling and load sharing capabilities for both single and three phase applications. The PFC-650 will begin sampling the last week of February. Watch the web site for further news. www.roassoc.com

Synergy Microwave – VCO's/Synthesizers – Synergy has expanded their .3" x .3" x .1" VCO family to 14 different devices and more are coming. With frequencies as low as 700 MHz and as high as 10950 MHz, this tiny family is gaining in popularity due to its small size, exceptional phase noise, excellent tuning linearity and optimized bandwidth. In other news, Synergy has posted a video on their web site which fully details their RelPro® contact methodology. This technology is much more reliable than the old castellation method and allows for easy solder joint inspection with a common microscope. You can see the video here: http://www.synergymwave.com/AppNotes/Rel-Pro-Video.asp Please contact us for any special requirements you may have and for additional information go to www.synergymwave.com

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Distribution Information:

Acme Electric (Acme, Actown, Amveco) – DigiKey, Go Electronics
AMC (Advanced Monolythic Ceramics) – Arrow, LXI, Newark, Simcona, SMD
Bench2Bench - None – **send quotes to your EMA sales rep**
Cambion – Bisco, Century Fasteners, GE Supply, Heilind, Newark
Combat Warrior Sales – None – **call 919-847-3188**
Cosmotronic – None – **send quotes to your EMA sales rep**
Delphi – Arrow, Astrex, Kitco, Koehlke Components
EverSpin – Arrow, Avnet, DigiKey, Future
Filconn – None - **send quotes to your EMA sales rep**
Isodyne – Combat Warrior Sales, Mil-Stock, SEA Wire & Cable
Kaga Electronics (Volgen Power) – DigiKey
Maglayers – Alfa Electronics, Edge, Projections Unlimited
NDK – Dependable, Dove, WPG Americas (formerly Jaco)
Prototron Circuits - None - **send quotes to your EMA sales rep**
Rectron – Chris Electronics, Edge, Mouser
RF Lambda – None – **send quotes to your EMA sales rep**
Riedon – DigiKey, NRC
RO Associates – None - **send quotes to your EMA sales rep**
Synergy Microwave – None – **send quotes to garcia@synergymwave.com**
TennMax USA – None – **send quotes to jeff@tennmaxusa.com**
United Electronics – None – **send quotes to your EMA sales rep**
Volgen Power – see Kaga Electronics
Winonics – None – **send quotes to your EMA sales rep**

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