CUSTOMER NEWSLETTER

Acme Electric – Toroids – Our focus product for Acme is Actown's patented technology called TightPak which solves a number of design problems for toroid designers. Its wire is formed so that you can get more turns in the same area. Typically, you can get 1.86 times the inductance with the same DCR. It may be desirable to reduce the size of your inductor. TightPak technology allows you to use smaller cores to achieve the same results as traditional products. If your inductor is running too hot, TightPak can allow you to use a larger wire size without going to a bigger core. It also can quiet down your inductor by keeping the design to a single layer instead of multiple layers. Please visit the Actown mini web site to learn more. www.tightpaktoroid.com or www.actown.com

TightPak

Conventional

Advanced Monolythic Ceramics (AMC) – Capacitors – AMC's focus product for this issue is X2Y technology products. AMC 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 offering the following performance advantages: significantly lower EMI with one component, provide superior noise suppression, offer 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. To learn more visit their web site at: www.amccaps.com

Cambion – Transformers – Not many people think of Cambion for low cost transformers, but from their humble beginnings as a family automotive company in 1912, they have grown to become a multi-national component supplier with annual sales of $750M. They have a broad base of products in the transformer arena including "E" core, "C" core, ETD, EFD, RM, EP and balun. These transformers are designed for use in a wide range of power supply units which have applications in telecom, military, aerospace, medical, lighting and even camera flash lights.

Cambion now offer low cost custom made transformers.

For more information visit their web site at: www.cambion.com

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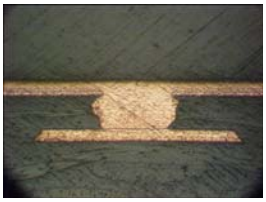
Cosmotronic – Military & commercial bare boards – Cosmotronic's operations manager, Nef Rios, has become a member of the IPC D-12 sub-committee for flexible circuit performance specifications and attended their recent meeting at the IPC Apex Expo in Las Vegas. The committee is responsible for maintaining the IPC-6013 specification for single, double sided and multi-layer rigid flex printed circuit boards. Its current project is to establish high density interconnect (HDI) requirements for the IPC-6013 specification with the intent to phase out the IPC-6016 specification. The topics of discussion were minimum annular ring for capture lands, the number of thermal stress cycles required, microsection magnification power, lifted land requirements and a review of the cross reference chart between IPC-6010 and IPC-QL-653. Cosmotronic's latest technology advance is the ability to copper fill micro vias. High density interconnect (HDI) designs that incorporate via-in-pad and/or stacked micro vias require that laser drilled micro vias be filled with a conductive material. By plating these features closed with copper, signal delays are minimized and differences in coefficient of expansion normally associated with conductive epoxy fillers are eliminated. Micro vias up to .007" in diameter and as deep as .0045" can be completely filled. Cosmotronic's web site is: www.cosmotronic.com



Copper filled & planarized micro via

Etched & solder coated

EverSpin – Non-volatile RAM – EverSpin is a fab-less semiconductor company that has spun out of Motorola/Freescale. If you have not heard of MRAM, you may want to look into the technology because it is very reliable and much more cost effective than competing technologies. Magnetic RAM does not require an external capacitor to keep it alive nor does it need a battery. It comes up live after a power failure and operates at 35 ns. Current densities include 256K, 1 mb and 4 mb in the x8 configuration and 1 mb, 2 mb and 4 mb in the x16 configuration. EverSpin is distributed by Arrow, Avnet, DigiKey, Farnell and Future. To learn more about their technology, visit www.everspin.com

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Isodyne – EMI back shells – Isodyne will be exhibiting at the IEEE EMC Society Symposium in Austin, TX August 17-21 2009. This event will be at the Austin Convention Center. The show web site is: www.emc2009.org for more information. One of the big advantages to their technology is the elimination of solder sleeves so even if you are not using copper braid in your application, it may still make sense to use an Isodyne back shell. You can reduce cost, time, weight and improve reliability. Contact EMA or visit: www.isodyneinc.com for more information.

NDK America – Crystals & Oscillators –NDK has released a **new ultra low power crystal clock oscillator**. The NZ2520SF measures 2.5 x 2.0 x .9 mm and operates at .9V +- .1V. In comparison with existing oscillators, the operating voltage is 50% lower and current consumption is at least 40% lower. This is equivalent to a 70% reduction in power consumption. This product will significantly increase battery life in all types of mobile devices and its wide range of frequencies 1.5 to 50 MHz will allow it to be used in a wide range of electronic devices. The NZ2520SF will be in volume production in October 2009 and is sampling now. NDK's web site for other product information is located at: http://www.ndk.com

RO Associates – Power Supply Bricks – RO Associates has announced a new ½ brick product that will deal with MIL-STD-1275 applications. This front end module will be rated at 300W and will address the 6 VDC cranking spec as well as the 50+ VDC transients that cause power supply designers to lose sleep. The power level is sized to support one 300W Microverter or two Quadraverter (the new 150W ¼ brick family). To learn more contact your EMA sales rep or check out their web site: www.roassoc.com

Synergy Microwave – VCO's/Synthesizers – The focus product is Synergy's MTS2500-200400-10 intelligent interactive synthesizer. This device measures 2" x 1.3" x .47" and features octave bandwidth tuning, small step size resolution, outstanding spectral purity, high spurious rejection, fast lock settling time and easy programmable format. The output frequency is 2 GHz to 4 GHz and requires an external reference of 10 MHz (factory programmable from 10 to 25 MHz with 10 as the standard). The step size is user programmable to 1 Hz. For additional information go to www.synergymwave.com

TennMax USA – EMI/RFI/Thermal Solutions – TennMax will be opening a U.S. facility in the Pacific North West next week which will dispense form in place gasketing (both conductive and environmental). They have qualified a nearby metal machine shop that is ITAR registered to partner with on turnkey design applications. Their Taiwanese facility has already been granted several ITAR waivers due to their unique capabilities in both the thermal and EMI/RFI management areas but having a U.S. facility will make it easier for military customers to do business with them. At this time there are no immediate plans to add vapor deposition services, but depending on customer demand and the success of the new operation, that could be added later. The TennMax web site is: www.tennmaxusa.com

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Distribution Information:

Acme Electric (Acme, Actown, Amveco) – DigiKey, Go Electronics
AMC (Advanced Monolythic Ceramics) – Arrow, LXI, Newark, Simcona, SMD
Cambion – Bisco, Century Fasteners, GE Supply, Heilind, Newark
Cosmotronic – None – **send Gerber data to quote@cosmotronic.com**
EverSpin – Arrow, Avnet, DigiKey, Farnell, Future
Isodyne – Combat Warrior Sales, Mil-Stock, SEA Wire & Cable
Kaga Electronics (Volgen Power) – DigiKey – **send quotes to mburks@volgen.com**
Maglayers – Edge, Projections Unlimited
NDK – Dependable, Dove, WPG Americas (formerly Jaco)
Rectron – Chris Electronics, Edge, Mouser
RF Lambda – None – **send quotes to michael@rflambda.com**
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**
Volgen Power – see Kaga Electronics
Winonics – None – **send Gerber data to rfq@winonics.com**

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