

## P-3 Inductive Components Committee Meeting Agenda

Wednesday April 16, 2003 (10:00am -12 noon)

Tempe Mission Palm Hotel  
60 East 5th Street  
Tempe, AZ 85281  
(480) 894-1400; (480) 968-7677

**Scope of the P-3 Committee on Inductive Devices (approved 10/7/98):** This committee covers all types of inductive components regardless of technology used in electronic circuits. It includes inductors, r.f. (chokes, filters, interference filters, inductors and transformers), chip inductors, and variable inductors.

### Attendees

<b><u>NAME</u></b>		<b><u>COMPANY</u></b>
Herbert	Baschke	EPCOS AG
Terry	Charles	Panasonic
Phil	Diglio	EPCOS Inc.
Robert	Galli	Panasonic
Bill	Gisseler	TDK Corporation of America
Mike	Lauri	IBM
Ming	Li	AEM, Inc.
Maher	Mahmud	IBM
Ed	Mikoski	EIA/ECA
Chris	Reynolds	AVX
Dave	Ritchey	Yageo/Phycomp
Maya	Velez	EPCOS AG

### 1.0 Committee Organization and Procedures

#### 1 Membership and attendance

Meeting was brought to order by Chairman Bill Gisseler at 10:00AM

<b><u>Member Organizations Present</u></b>	<b><u>Present at this meeting?</u></b>	<b><u>Present at previous meeting?</u></b>	<b><u>Present at meeting prior to previous?</u></b>
AEM	Yes	Yes	Yes
AVX Corporation	Yes	Yes	Yes

EPCOS, Inc.	Yes	No	Yes
IBM Corporation	Yes	Yes	Yes
Panasonic Industrial Co.	Yes	Yes	Yes
TDK Corporation of America	Yes	Yes	Yes
Yageo (Phycomp USA, Inc.)	Yes	Yes	Yes

<b><u>Member Organizations Absent</u></b>	<b><u>Present at this meeting?</u></b>	<b><u>Present at previous meeting?</u></b>	<b><u>Present at meeting prior to previous?</u></b>
Cooper Bussmann/Electronic Technologies	No	No	Yes
Intel Corp	No	No	Yes
KOA Speer Electronics	No	No	Yes
Lucent Technologies*	No	No	No
Murata	No	Yes	No
Steward*	No	Yes	No
Taiyo Yuden	No	No	Yes
Vishay	No	Yes	No

\* Not counted in determination of quorum. Lucent due to non-attendance, Steward listed on previous minutes as member, but signed in as Guest.

<b>Other Organizations Present</b>
EIA/ECA

1.1 Approval of the minutes from the October 9th, 2002 meeting in Charlotte, NC  
Attendance taken via a sign in sheet that was passed around for sign-in by those in attendance.

1.2 Approval of agenda for the current meeting  
A motion was made and seconded to accept the minutes of the October 9th meeting as presented. Vote taken and passed by the majority.

1.3 Approval of agenda  
Approval of agenda presented for today's P-3 inductive Components Committee meeting. A motion was made and seconded to accept the agenda as presented. A voice vote followed in which the aforementioned motion was approved by the majority.

1.4 Correspondence  
Chairman Gisseler announced that no correspondence had been received.

## **2.0 Committee Organization and Procedures**

2.1 PN-4233 Surface Mount Inductor Qualification Specification publication status was discussed. General consensus was that a ballot needs to be sent to the members in order to adopt the publication. Chairman Gisseler is forwarding the finalized document PN-4233 to EIA/ECA for publication balloting & vote.

2.2 PN-4315 Surface Mount Chip Bead Qualification Specification publication status was discussed. General consensus again was that a ballot needs to be sent to the members in order to adopt the publication. Chairman Gisseler is forwarding the finalized document PN-4315 to EIA/ECA for publication balloting & vote.

2.3 Nominations for Secretary of the P-3 group was discussed and Edward Mikoski nominated Phil Diglio, Marketing Manager Inductors and EMC Components of Epcos Inc., as secretary. Motion was seconded and carried by the majority.

### **3.0 New Business and Opportunities**

3.1 Additional test and characterization of Chip Bead Impedances - See summary text Below

3.2 Test Procedures & recommended Electrical parameters for SMD Inductors and Ferrite Beads - See summary text Below

3.3 Equipment and Test Fixture considerations - See summary text Below

3.4 Surface mount Multilayer (Ceramic Inductors). - See summary text Below

3.5 Characterization of multilayer inductors at RF Frequencies - See summary text Below.

### **Summary Discussion**

3.1 through 3.5 above were essentially discussed as one entity. There was a general consensus that Manufacturers incorporate different equipment and test conditions for their similar products. What needs to be done as a start to possibly establish some standardization, is to prepare a survey designed to start a mapping of the equipment used by manufactures to test SMT Beads and Inductors for EIA standard sizes. The goal is see where there is some degree of common testing being done, along with similar equipment and test conditions, etc..

**SMT Ferrite Beads - EIA standard sizes only**

			Test equip used for				DCR	Test Fixture
			Impedance Z	Ref Test Frequency	Signal Level	Test Fixture		
Bead Type	Size	Application						
<b>Category A</b>								
Wire wound	0201	Signal	HP-xxxx A	x.x MHz	mV, mA	HP -xxx	R. Bridge xx	
		Power						
		High Speed 300MHz+						
	0402	Signal						
		Power						
		High Speed 300MHz+						
	0603	Signal						
		Power						
		High Speed 300MHz+						
	0805 - 1806	Signal						
		Power						
		High Speed 300MHz+						
<b>Category B</b>								
MultiLayer	Same procedure as above							



<b>Category C</b>										
Thin Film	Same procedure as above									
<b>Category D</b>										
Laser Cut	Same procedure as above									

**3.6 New Business –**

For Future meetings - Power Inductors - Standardization, Common Mode chokes and Data Line Chokes Mechanical standards – i.e. - IBM Nickel Barrier Thickness standards. To accompany the survey the committee needs to create a Mission statement and Questionnaire for the survey.

**4.0 Next Meetings –**

San Antonio, Texas, Marriott River Center, October 06 thru October 09, 2003  
Tampa, Florida - Spring 2004 (April 19th thru the 22nd)

**5.0 Adjournment –**

Motion made, seconded and carried by the majority at 11:58AM Local time

This meeting was conducted in accordance with the EIA legal guidelines and the manual of organization and procedures.

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Bill Gisseler  
Chairman

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Phil Diglio  
Secretary