

SPACE PASSIVE COMPONENTS DAYS

1st International Symposium

Introduction and Logistics

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ESA ESTEC TEC-QTC

ESA/ESTEC - 24/09/2013

1. Why A new symposium ?
2. What are the objectives of this symposium ?
3. What is scheduled ?

Why this new Symposium ?



ESA is organizing or contributing to organize quite a lot of very interesting conferences



**2nd esa workshop on
stress corrosion cracking in space applications**
6-7 november 2013

European Space Agency



10th European Space Power Conference (ESPC)
13-17 April 2014

European Space Agency



9th esa round table on micro and nano technologies
Lausanne, Switzerland, 10 - 13 June 2014

European Space Agency

(More on <http://www.congrexprojects.com/list-of-events>)

But none are specifically addressing Passive EEE Parts issues

Why this new Symposium ?



Space International Conferences not dedicated to Passives EEE Parts



Space Parts Working Group



No conference covering the various technologies of passives EEE parts with a focus on space application



24th European Symposium on Reliability of Electron Devices, Failure Physics and Analysis



September 30th - October 4th 2013
Arcachon - France

What are the objectives ?



Space Agencies



Users



Manufacturers

- ✓ Promote Discussion
- ✓ Exchange Technical Expertise
- ✓ Share Information
- ✓ Ease Contact

Connectors



Capacitors



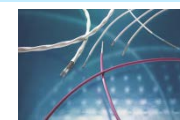
Heaters



Magnetics



Wires & Cables



Fuses



Resistors



Crystals & oscillators



Relays & Switches



Thermal Sensors



RF passives



38 Presentations

1. Point of View of Space Agencies
 - a. First Day : ESA, CNES and DLR for the ESCC
 - b. Second Day : JAXA
 - c. Third Day : DELL/NASA

2. Roadmap and Lessons-Learnt from Users
 - ⇒ Needs and roadmap
 - ⇒ Application : On board data processing, Exomars
 - ⇒ Lessons learnt : Assembly, DPA, procurement, database

3. New Developments, Reliability, Application by Manufacturers

4. Technical Introduction of Manufacturers

What is scheduled ?



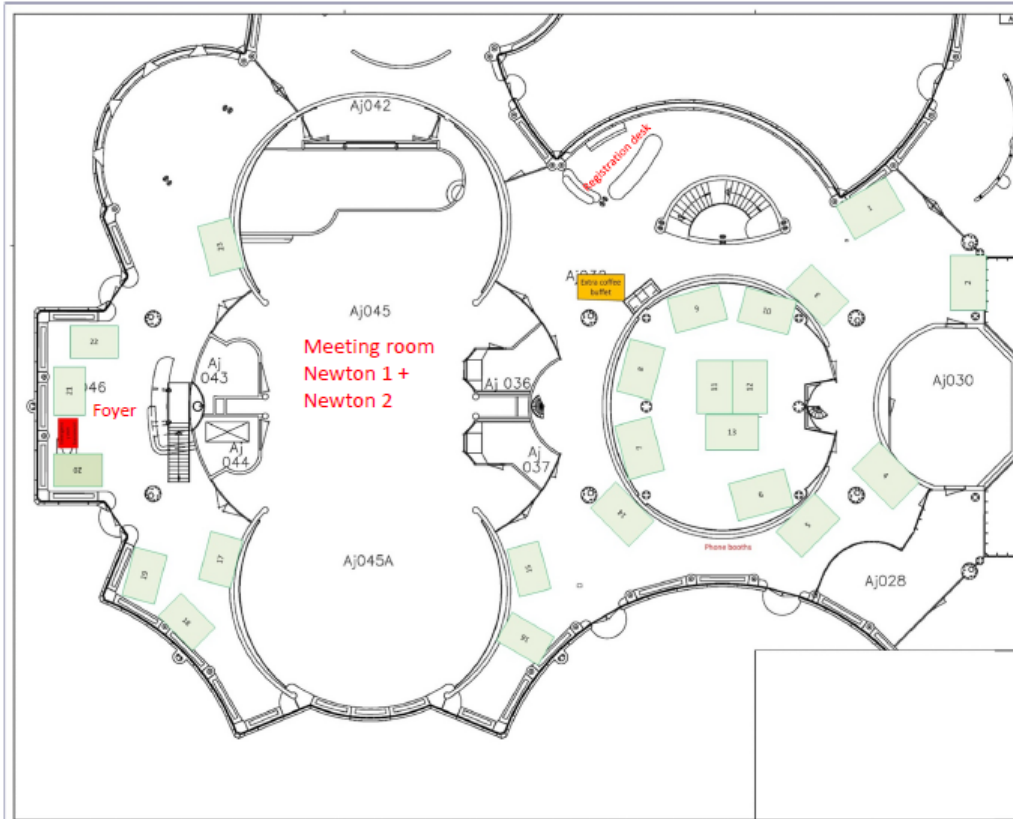
24 September 2013			
08:30	09:30	Registration	
09:30	10:00	Welcome introduction speech	
10:00	11:00	ESCC, European NSA	ESA, CNES, DLR
Session 1 Technology Roadmap and needs			
11:00	11:25	Astrium short term and mid-term Passive road map	Astrium
11:25	11:50	Thales Alenia Space Road Map	Thales Alenia Space
11:50	12:10	Coffee break	
12:10	12:35	Enabling technologies to meet future onboard data processing needs	ESTEC
12:35	13:00	Miniaturization of cables and connectors in transmission lines	axon-cable
13:00	14:00	Lunch	
14:00	14:30	Enlarging The Product Offering Of Space-Qualified Resistors And Networks	Vishay / Sfernice
14:30	14:55	Flexible Terminations for Space Applications	EUROFARAD
14:55	15:20	Space Qualified L, S and C-Band High Power Ferrite Isolators	TRAK
15:20	15:50	Coffee break	
Session 2 Application			
15:50	16:15	Miniaturised High Density Solderless Interconnect Solutions (Interposers)	Smiths Connectors Hypertac
16:15	16:40	Advanced Blowing Model for Solid State Technology Fuses Applied to Schurter's Components	Astrium
16:40	17:05	Circular robotics connectors for the Exomars program	Thales Alenia Space
17:05	17:30	A modular connector for high speed backplanes	SEA
17:30	19:00	Welcome drink and poster session at the exhibition area	

25 September 2013			
08:30	09:00	Session and chair introduction	
09:00	09:30	JAXA	
Session 3 New Developments			
09:30	09:50	Introduction of Small Size MLCC to Aero-Space Application and its Technology	Murata
09:50	10:10	Development and production of a discrete type - solid body fuse	Tateyama Kagaku
10:10	10:30	Presentation of Japanese reliable temperature sensor listed in EPPL	Mitsubishi
10:30	10:55	High power and energy density ultracapacitors in space environment	Skeleton
10:55	11:25	Coffee break	
11:25	11:50	Low ESR SMD Tantalum Capacitors for Aerospace Applications	AVX CZ
11:50	12:15	Special features in Space Magnetics to support insulation requirements in High Voltage Applications and to improve thermal connectivity as well as assembly time.	ASP-Equipment
12:15	12:40	Platinum thinfilm sensors for space applications	IST AG
12:40	12:45	REL STPI Group	
12:45	12:50	MINCO SAS	
12:50	12:55	SOURIAU SAS	
12:55	13:00	Vishay Precision Group	
13:00	14:05	Lunch	
14:05	14:30	High Density Coaxial Interconnect Solution for Space Applications Requiring High Electrical Stability	HUBER+SUHNER
14:30	14:55	A New Generation of RF Switching Matrix for Space Applications	Teledyne Relays
14:55	15:20	Space L-band high power ferrite isolator	Cobham
15:20	15:50	Coffee break	
15:50	16:15	Carbon Nanotube Low Voltage Differential Signal Cables for Space Applications	TE Connectivity
16:15	16:40	Development of new High Temperature Wires and Cables for Space Applications	AXON CABLE
16:40	17:05	Self Regulating Heating Cable - Proven Terrestrial Technology on its Way to Space	eltherm
17:05	17:30	LIGA and its Application to Electrical Interconnects	Rosenberger
17:30	17:55	Power Sub-Miniature (PSM) Connectors for Space Applications (C20967 ESA)	HUBER+SUHNER
Evening		Dinner at Breakers Beach House, Noordwijk	

26 September 2013			
08:30	09:00	Session and chair introduction	
Session 4 Procurement, Test, Reliability and Evaluation for Space			
09:00	09:30	Necessity for DPA on Passive EEE Components	TESAT
09:30	09:55	New Reliability Assessment Practices for Tantalum Polymer Capacitors	KEMET
09:55	10:20	Polymer Hermetic Sealed Tantalum Capacitors for Space Applications	KEMET
10:20	10:45	High CV Surface Mount Ceramic Capacitors for Space Applications	AVX UK
10:45	11:15	Coffee break	
11:15	11:40	Investigation of Failure Mechanisms of Low Power Isolators and Circulators	COBHAM
11:40	12:05	Extreme Temperature Characterization of Passive Components	ALTER
12:05	12:30	Activity-dip characterizations on standard oscillators	Astrium
12:30	12:35	Q-Tech Corporation	
12:35	12:40	KVG Quartz Crystal Technology GmbH	
12:40	12:45	Astrium Ltd	
12:45	12:50	Tesat Spacecom	
12:50	12:55	Mier Comunicaciones, S.A.	
12:55	13:00	FLUX A/S	
13:00	14:00	Lunch	
14:00	14:25	Verification of the assembly per ECSS-Q-ST-70-38 and passive devices associated failure	ESA
14:25	14:50	Space Harness Design Optimization: opportunities on ECSS derating rules	ASTRIUM
14:50	15:15	NASA Capacitor Evaluations - An Overview	NASA
15:15	15:45	Coffee break	
15:45	16:10	Derating of surge and ripple currents for tantalum capacitors	DELL
16:10	16:35	Insulation resistance and leakage currents in ceramic capacitors with cracks	DELL
16:35	17:00	Closure Speech	ESA

What is scheduled ?

Exhibition Area



Company	#
Rosenberger	1
Rakon	2
Radiall	3
Alter Technology	4
TESAT	5
Exxelia	6
Esterline	7
AVX	8
Measurement Specialties Ltd.	9
Schurter AG	10
Coilcraft	11
Vishay	12
Minco SAS	13
MESL	14
Cobham	15
KVG	16
Glenair	17
Teledyne Aerospace and Defense Electronics	18
TE Connectivity	19
C&K	20
Hypertac	21
Axon Cable	22
W. L. Gore & Associates GmbH	23

What is scheduled ?



ESA, DLR, CNES STAND

ESCC qualified components

Activities on Going

Sample and Catalogue

Come and Meet CNES, DLR, ESA experts

JAXA stand

Passive EEE part Manufacturer

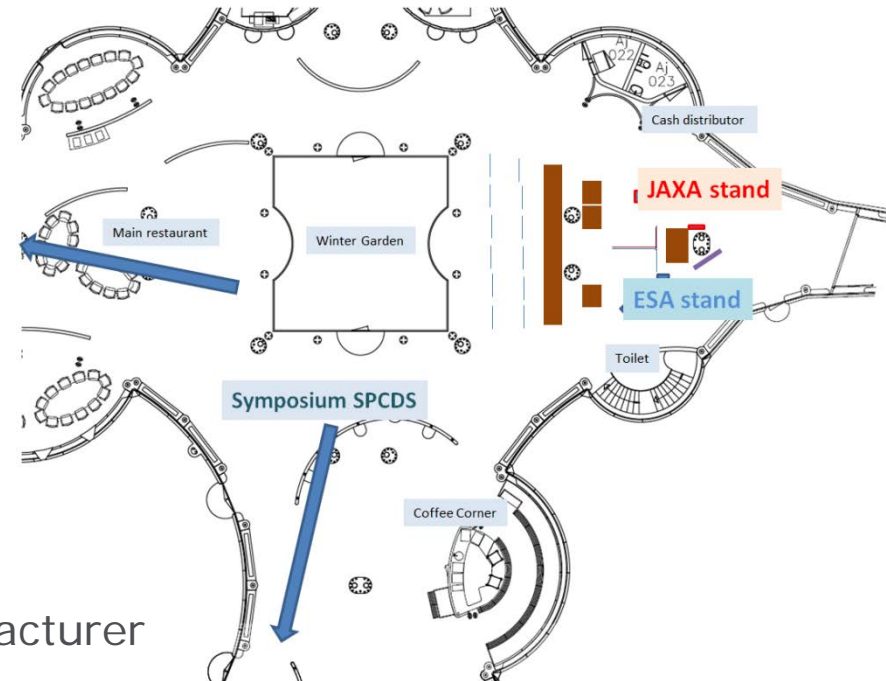
Samples and catalogue

Come and Meet JAXA and Japanese Manufacturer

Poster Session

Welcome Drink

Dinner



1. Presenters
 - a. Upload presentation material before each session
 - b. Presentation time 20 minutes maximum, 5 minutes for questions
2. Workshop bag
 - a. Proceedings booklet
 - b. USB key with publication
3. Lunch and coffee breaks
 - a. Coffee outside Newton in foyer and close to registration desk
 - b. Lunch – self service, timing around 13:00 (1 hour duration)
4. Internet wireless access
5. Post workshop web access with presentations

Thanks to...



Thanks to the ESCC Qualified/EPPL Manufacturer who contributed to the ESCC/ESA stand



Thanks to...



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