

 ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®		Material Composition Declaration © Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.		This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility. Adobe Reader version 7.0.5 is required to complete this declaration.					
1752-2 1.1		IPC Web Site for Information on IPC-1752 Standard http://www.ipc.org/IPC-175x			Form Type * Request/Reply		Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information		

Requester Information										Lock Request Fields	
Company Name *		Company Unique ID		Unique ID Authority		Request Date*		Request Document ID		Respond By Date	
Contact Name *		Contact Title		Contact Phone *		Contact Email *		Requester Comments or URL for Additional Information			
My supplier ID		The File Type and Destination fields control how the form is submitted by the supplier. Consult your IT staff for configuration.				File Type PDF	Destination - URL or Email Address			☐ Supplier provides Mfr Item Version & Manufacturing Site.	
	Item Number *	Item Name	Mfr Item Number *		Mfr Item Name		Mfr Item Version		Manufacturing Site		
	OX4150A-D3-1-12.800-3.3										

Supplier Information											
Company Name *		Company Unique ID		Unique ID Authority		Response Date *		Response Document ID			
RAMI Technology						2014-10-15					
Contact Name *		Title - Contact		Phone - Contact *		Email - Contact *		Duplicate Contact -> Authorized Representative			
YG Jiao				305-593-6033		ygjiao@ramitechnology.com					
Authorized Representative *		Title - Representative		Phone - Representative *		Email - Representative *		Supplier Comments or URL for Additional Information			
Frank Parra				305-593-6033		frank@raltron.com					
	Requester Item Number	Mfr Item Number	Mfr Item Name		Effective Date	Version	Manufacturing Site		Weight *	UOM	Unit Type
	OX4150A-D3-1-12.800-3.3				2021-01-07				9.1794	g	Each
	Alternate Recommendation					Alternate Item Comments					

Manufacturing Process Information						
Terminal Plating / Grid Array Material		Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
Nickel (Ni)		Kovar	1	265 C	10 seconds	3
Comments						

Save the fields in this form to a file	Export Data	Import fields from a file into this form	Import Data	Clear all of the fields on this form	Reset Form	Lock the fields on this form to prevent changes	Lock Supplier Fields
--	--	--	--	--------------------------------------	---	---	---

RoHS Material Composition Declaration		Declaration Type *	Simplified
RoHS Directive 2002/95/EC	RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium		
Supplier certifies that it gathered the information it provides in this form concerning RoHS restrictive substances using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part, the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.			
RoHS Declaration *	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions		Supplier Acceptance * Accepted
Exemptions: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.			
Exemption List Version			
+ -			

Declaration Signature	
Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.	
Supplier Digital Signature	Frank Parra Digitally signed by Frank Parra DN: cn=Frank Parra, o=Ramtron / RAMI Technology, ou=Quality Assurance, email=frank@ramtron.com, c=US Date: 2014.08.21 16:32:53 -0400

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Line Functions: +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

	Item/SubItem Name		Homogeneous Material	Weight	Unit of Measure		Level	Substance Category		Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
															-	+	
+I	-I	Power Transistor	+M -M	Chip	0.22	mg	+C -C	Supplier	Silicon	+S -S	silicon	7440-21-3		0.22	mg		4,280
			+M -M	Leadframe	25.43	mg	+C -C	Supplier	Copper	+S -S	copper	7440-50-8		25.27	mg		491,62
									+S -S	Iron	7439-89-6		0.03	mg			584
									+S -S	Phosphorus	7723-14-6		0.01	mg			195
									+S -S	Silver	7440-22-4		0.08	mg			1,362
						+C -C	B	Nickel (external applic	+S -S	Nickel	7440-02-0		0.04	mg			788
			+M -M	Wries	0.03	mg	+C -C	Supplier	Gold wire	+S -S	gold	7440-57-5		0.03	mg		584
			+M -M	Encapsulation	24.69	mg	+C -C	Supplier	silica	+S -S	silica,fused	60676-86-0		18.06	mg		351,37
									+S -S	Phenol Novolac	9003-35-4		1.76	mg			34,297
									+S -S	Epoxy Cresol Novolac	29690-82-2		3.24	mg			63,118
									+S -S	Carbon Black	1333-86-4		0.07	mg			1,393
									+S -S	Undisclosed			0.78	mg			15,082
						+C -C	B	Antimony/Antimony C	+S -S	Antimony trioxide	1309-64-4		0.78	mg			15,082
			+M -M	Leadfinish	0.72	mg	+C -C	Supplier	tin	+S -S	matter Tin	7440-31-5		0.72	mg		13,619
+I	-I	Cooper sheet	+M -M	copper sheet	570	mg	+C -C	Supplier	copper	+S -S	copper	7440-50-8		569.9165	mg		99,920
									+S -S	Iron	7439-89-6		0.0239	mg			40
									+S -S	tin	7440-31-5		0.0179	mg			30
						+C -C	A	Lead/Lead Compound	+S -S	Lead	7439-92-1	7a. Lead	0.0129	mg			20
						+C -C	B	Nickel (external applic	+S -S	Nickel	7440-02-0		0.0288	mg			50
+I	-I	Inductor	+M -M	Base	8.6232	mg	+C -C	Supplier	alumina	+S -S	Al2O3	1344-28-1		8.6232	mg		
			+M -M	Conductive Pad	0.95181	mg	+C -C	Supplier	Silver	+S -S	Silver	7440-22-4		0.17607	mg		
									+S -S	Palladium	7440-05-3		0.04917	mg			
									+S -S	Rosin,hydrogenated	65997-06-0		0.0078	mg			

+S	-S	Platinum	7440-06-4		0.00728	mg			
+S	-S	Diboron-trioxide	1303-86-2		0.00245	mg			
+S	-S	Silicon Dioxide	1408-60-7		0.37089	mg			
+S	-S	Magnesium Dioxide	1309-48-4		0.27817	mg			
+S	-S	Misc	No CAS		0.04	mg			

						+C	-C	B	Bismuth/Bismuth Con	+S	-S	Bismuth trioxide	1304-76-3		0.01998	mg			
+M	-M	Ink	0.009	mg	+C	-C	Supplier	Ink		+S	-S	Pigment portion	No CAS		0.00585	mg			

[illegible]

+M	-M	Wire	0.74254	mg	+C	-C	Supplier	Copper	+S	-S	Copper	7440-50-8		0.74254	mg			
----	----	------	---------	----	----	----	----------	--------	----	----	--------	-----------	--	---------	----	--	--	--

+M	-M	Wire cover	0.07346 mg	+C	-C	Supplier	Polyester resin	+S	-S	Polyester resin	68604-67-1		0.07346 mg							
----	----	------------	------------	----	----	----------	-----------------	----	----	-----------------	------------	--	------------	--	--	--	--	--	--	--

[illegible]

+M	-M	Termination elec	1.26	mg	+C	-C	Supplier	Copper	+S	-S	Copper	7440-50-8	1.26	mg			
----	----	------------------	------	----	----	----	----------	--------	----	----	--------	-----------	------	----	--	--	--

+M	-M	Surface plating	0.13	mg	+C	-C	Supplier	Material	+S	-S	Tin	7440-31-5	0.13	mg			
----	----	-----------------	------	----	----	----	----------	----------	----	----	-----	-----------	------	----	--	--	--

+M	-M	Under plating	0.78	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		0.78	mg				
----	----	---------------	------	----	----	----	---	-------------------------	----	----	--------	-----------	--	------	----	--	--	--	--

[illegible]

+M	-M	Termination elect	0.22	mg	+C	-C	Supplier	Copper	+S	-S	Copper	7440-50-8	0.22	mg			
----	----	-------------------	------	----	----	----	----------	--------	----	----	--------	-----------	------	----	--	--	--

+M	-M	Surface plating	0.05	mg	+C	-C	Supplier	Material	+S	-S	Tin	7440-31-5	0.05	mg			
----	----	-----------------	------	----	----	----	----------	----------	----	----	-----	-----------	------	----	--	--	--

+M	-M	Under plating	0.32	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		0.32	mg				
----	----	---------------	------	----	----	----	---	-------------------------	----	----	--------	-----------	--	------	----	--	--	--	--

[illegible][illegible]

+S	-S	GlassFrit	65997-18-4	0.02	mg				
----	----	-----------	------------	------	----	--	--	--	--

+S	-S	silver	7440-22-4		0.088	mg			
----	----	--------	-----------	--	-------	----	--	--	--

+S	-S	tin	7440-31-5		0.1	mg			
----	----	-----	-----------	--	-----	----	--	--	--

+S	-S	Epoxy	25068-38-6	0.0034	mg				
----	----	-------	------------	--------	----	--	--	--	--

+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0	0.18	mg			
----	----	---	-------------------------	----	----	--------	-----------	------	----	--	--	--

[illegible]

+S	-S	RuO2	12036-10-1		0.008	mg				
----	----	------	------------	--	-------	----	--	--	--	--

+S	-S	GlassFrit	65997-18-4	0.008	mg				
----	----	-----------	------------	-------	----	--	--	--	--

+S	-S	silver	7440-22-4	0.352	mg			
----	----	--------	-----------	-------	----	--	--	--

+S	-S	tin	7440-31-5		0.04	mg			
----	----	-----	-----------	--	------	----	--	--	--

+S	-S	Epoxy	25068-38-6	0.0028	mg				
----	----	-------	------------	--------	----	--	--	--	--

[illegible]

+I	-I	Cover	+M	-M	Cover	2,360.95	mg	+C	-C	Supplier	Material	+S	-S	Copper	7440-50-8		1,404.74	mg													
												+S	-S	zinc	7440-66-6		557.77	mg													
												+S	-S	phosphorus	7723-14-0		1.0937	mg													
												+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		396.05	mg									
+I	-I	Base	+M	-M	baseboard	3,235.24	mg	+C	-C	Supplier	spcc	+S	-S	iron	7439-89-6		3,228.86	mg													
												+S	-S	manganese	7439-96-5		4.32751	mg													
												+S	-S	carbon	12424-49-6		1.47308	mg													
												+S	-S	phosphorus	7723-14-0		0.652	mg													
												+M	-M	insulator	80.04	mg	+C	-C	Supplier	Glass	+S	-S	SiO2	15468-32-3		44.16	mg				
												+S	-S	Al2O3	1344-28-1		8.28	mg													
												+S	-S	B2O3	1303-86-2		13.8	mg													
												+S	-S	Na2O	1313-59-3		8.28	mg													
												+S	-S	K2O	12030-88-5		2.76	mg													
												+S	-S	Li2O	12057-24-8		2.76	mg													
												+M	-M	pin	95.3925	mg	+C	-C	Supplier	KOVAR	+S	-S	iron	7439-89-6		76.02185	mg				
												+S	-S	cobalt	7440-48-4		17.4515	mg													
												+S	-S	manganese	7439-96-5		1.4492	mg													
												+S	-S	copper	7440-50-8		0.05	mg													
												+S	-S	carbon	12424-49-6		0.15	mg													
												+S	-S	phosphorus	7723-14-0		0.12	mg													
												+M	-M	solder	3.30772	mg	+C	-C	Supplier	silver	+S	-S	silver	7440-22-4		3.1629	mg				
												+S	-S	Copper	7440-50-8		0.14482	mg													
												+M	-M	cladding material	12.6222	mg	+C	-C	Supplier	Material	+S	-S	tin	7440-31-5		12.47745	mg				
												+S	-S	Copper	7440-50-8		0.14482	mg													
												+M	-M	nickel dam	49.4305	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		49.43055	mg				
												+I	-I	PCB	+M	-M	board	718.5	mg	+C	-C	Supplier	epoxy resin	+S	-S	epoxy resin	129915-35		319	mg	
												+S	-S	fibre glass	65997-17-3		290.5	mg													
												+S	-S	copper	7440-50-8		101.5	mg													
												+S	-S	barium sulfate	7727-43-7		7.5	mg													
												+M	-M	surface	7.5	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		5.5	mg				
												+C	-C	Supplier	Material	+S	-S	gold	7440-57-5		2	mg									
+I	-I	PCB adaptor	+M	-M	board	1,523.5	mg	+C	-C	Supplier	epoxy resin	+S	-S	epoxy resin	129915-35		620	mg													

+M	-M	surface	26.5	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		18	mg			
					+C	-C	Supplier	Material	+S	-S	gold	7440-57-5		8.5	mg			
+M	-M	Bond Wire	0.0046	mg	+C	-C	Supplier	Precious Metals	+S	-S	gold	7440-57-5		0.0046	mg			437
+M	-M	Die Attach Adhes	0.04686	mg	+C	-C	Supplier	Precious Metals	+S	-S	Silver	7440-22-4		0.03421	mg			1,886
					+C	-C	Supplier	Thermosets	+S	-S	Epoxy	129915-35		0.0126	mg			697
+M	-M	Lead Frame	0.38348	mg	+C	-C	Supplier	Copper & Its Alloys	+S	-S	copper	7440-50-8		0.37868	mg			347,61
									+S	-S	Iron	7439-89-6		0.0008	mg			8,600
									+S	-S	Zinc	7440-66-6		0.004	mg			2,060
					+C	-C	A	Lead/Lead Compound	+S	-S	Lead	7439-92-1	7c. Lead	0.0002	mg			35
+M	-M	Lead Frame Plas	0.02046	mg	+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		0.01903	mg			6,817
					+C	-C	Supplier	Precious Metals	+S	-S	Gold	7440-57-5		0.00122	mg			55
									+S	-S	Palladium	7723-14-0		0.00021	mg			293
+M	-M	Mold Compound	3.40907	mg	+C	-C	Supplier	Other Inorganic Mat	+S	-S	Fused Silica	60676-86		2.89766	mg			528,45
									+S	-S	Carbon Black	1333-86-4		0.01023	mg			1,865
					+C	-C	Supplier	epoxy resin	+S	-S	epoxy resin	129915-35		0.50118	mg			91,392
+M	-M	Semiconductor	0.17995	mg	+C	-C	Supplier	Other Inorganic Mat	+S	-S	Doped Silicon	7440-21-3		0.17995	mg			9,727
+M	-M	Packaging mat	1.872	mg	+C	-C	Supplier	epoxy resin	+S	-S	epoxy resin	129915-35		0.7	mg			
									+S	-S	resin	NO CAS		1.1	mg			
									+S	-S	Carbon Black	1333-86-4		0.072	mg			
+M	-M	chip	32.4	mg	+C	-C	Supplier	silica	+S	-S	silica	14808-60-7		32.4	mg			
+M	-M	pin	22.2572	mg	+C	-C	Supplier	Metals	+S	-S	copper	7440-50-8		17.6046	mg			
									+S	-S	gold	7440-57-5		0.8	mg			
									+S	-S	Silver	7440-22-4		0.52745	mg			
									+S	-S	tin	7440-31-5		2	mg			
									+S	-S	silicon	7440-21-3		1.32519	mg			
+M	-M	Electrode	0.4	mg	+C	-C	Supplier	material	+S	-S	silver	7440-22-4		0.4	mg			
+M	-M	blank	42.4435	mg	+C	-C	Supplier	Silica	+S	-S	Silica	60676-86-0		42.4435	mg			
+M	-M	plating	0.05684	mg	+C	-C	Supplier	gold	+S	-S	gold	7440-57-5		0.05684	mg			
+M	-M	cover	730.005	mg	+C	-C	Supplier	KOVAR	+S	-S	iron	102-54-5		43.365	mg			

+S	-S	cobalt	10141-05-6		29	mg			
+S	-S	manganese	7439-96-5		0.01	mg			
+S	-S	Copper	7440-50-8		623	mg			
+S	-S	chromium	7440-47-3		0.14028	mg			

					+C	-C	B	Nickel (external applica	+S	-S	Nickel	7440-02-0		34.49	mg			
+M	-M	base	266.763	mg	+C	-C	Supplier	material	+S	-S	Copper	7440-50-8		100	mg			
					+C	-C	Supplier	LEAD BISILICATECAS	+S	-S	LEAD BISILICATECAS	65997-18-4	7c. Lead	5	mg			
					+C	-C	Supplier	KOVAR	+S	-S	iron	102-54-5		41.985	mg			
									+S	-S	cobalt Nitrate	10141-05-6		68.73	mg			
									+S	-S	manganese	7439-96-5		0.01	mg			
									+S	-S	Copper	7440-50-8		2	mg			
									+S	-S	chromium	7440-4-3		14.028	mg			
									+S	-S	zinc	7440-6-6		2	mg			
					+C	-C	B	Nickel (external applica	+S	-S	Nickel	7440-02-0		33.01	mg			
+I	-I	Voltage Regulator	0.13897	mg	+C	-C	B	Arsenic/Arsenic Comp	+S	-S	Arsenic	7440-38-2		0.000005	mg			1
					+C	-C	Supplier	material	+S	-S	Titanium	7440-32-6		0.00006	mg			19
									+S	-S	Aluminium	7429-90-5		0.00087	mg			301
									+S	-S	silicon	7440-21-3		0.135985	mg			47,002
									+S	-S	copper	7440-50-8		0.00004	mg			5
									+S	-S	Boron	7440-42-8		0.00003	mg			
									+S	-S	phosphorus	7723-14-0		0.00004	mg			14
									+S	-S	polybenzox	NO CAS		0.00194	mg			669
+M	-M	die bond	0.0232	mg	+C	-C	Supplier	material	+S	-S	silver	7440-22-4		0.012	mg			4,138
					+C	-C	Supplier	epoxy	+S	-S	epoxy	129915-35		0.0032	mg			1,103
									+S	-S	aryl amine	NO CAS		0.008	mg			276
+M	-M	lead frame	1.30199	mg	+C	-C	Supplier	material	+S	-S	copper	7440-50-8		1.239295	mg			427,34
									+S	-S	chromium	7440-47-3		0.00326	mg			1,122
									+S	-S	tin	7440-31-5		0.00326	mg			1,122
									+S	-S	zinc	7440-66-6		0.00286	mg			988
									+S	-S	silicon	7440-21-3		0.00034	mg			112
									+S	-S	silver	7440-22-4		0.05301	mg			18,280
+M	-M	plating	903.55	mg	+C	-C	Supplier	material	+S	-S	tin	7440-31-5		0.05	mg			17,244

* Required Field

CAS Registry Number(R) is a Registered Trademark of the American Chemical Society

Form enabled by Adobe

+M	-M	mold resin	1.37273	mg	+C	-C	Supplier	silica	+S	-S	silica	60676-86-0		1.15969	mg			399,89
									+S	-S	BI-phenyl epoxy resin	85954-11-6		0.08236	mg			28,402
									+S	-S	phenolic	26834-02-6		0.06864	mg			23,668
									+S	-S	carbon	1333-86-4		0.00686	mg			2,367
									+S	-S	organic phosphoro u	NO CAS		0.00027	mg			95
									+S	-S	Silica crystalline	14808-60-7		0.05491	mg			18,924
+M	-M	bonding wire	0.02	mg	+C	-C	Supplier	material	+S	-S	gold	7440-57-5		0.02	mg			6,897

Homogeneous Material Composition Declaration for Electronic Products

Requester Instructions: The requester can optionally include additional substance categories and substances that must be declared for the item on this form. This is in addition to JIG Level A and JIG Level B substances already included for the JIG section. The requester should enter additional substance categories and then enter name of the substance and the CAS number. These entries will be accessible to the supplier via Level drop-down by selecting "Requester". Use the Load "Requester" and Test button to view the entries, just select "Requester" in the Level drop-down list in the previous section.

		Substance Category			Substance	CAS
+C	-C		+S	-S		
Update Level "Requester" and Test			Clear Level "Requester" values			