



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 * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
------------	----------------------------------------------------------------------------------------------------------------------------	---------------------------	--------------------------------------------------------------------------------------

Supplier Information

Company Name * Anaren Microwave	Company Unique ID	Unique ID Authority	Response Date * 2022-03-30	Response Document ID				
Contact Name * Herbert Jones	Title - Contact Project Engineer	Phone - Contact * 315-233-5510	Email - Contact * Herbert.Jones@ttm.com	Duplicate Contact -> Authorized Representative				
Authorized Representative * Herbert Jones	Title - Representative Project Engineer	Phone - Representative * 315-233-5510	Email - Representative * Herbert.Jones@ttm.com	Supplier Comments or URL for Additional Information				
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
	A100N50X4A	Termination	2022-03-30	A	East Syracuse	0.129076	g	Each
Alternate Recommendation				Alternate Item Comments				

Manufacturing Process Information

Terminal Plating / Grid Array Material Matte Tin (Sn) - with Nickel (Ni) barrier	Terminal Base Alloy Silver (Ag)	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 3
-------------------------------------------------------------------------------------	------------------------------------	---------------------------	----------------------------------------	--------------------------------------------	------------------------------

Comments
Compliant to RoHS 2 Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 and Commission Delegated Directive 2015/863/EU of 31 March 2015.

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 *

Custom

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

RoHS 2 (Directive 2011/65/EU and 2015/863/EU) Definition Addendum: Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP). 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 *

1 - Item(s) does not contain RoHS restricted substances per the definition above

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.

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

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	A100N50X4A Rev A	+M -M	Substrate	0.121876g	+C	-C	Supplier	Yttrium (III) oxide (Y2	+S -S	Yttrium (III) oxide (Y2O3	1314-36-9		0.006093g			50,000
						+C	-C	Supplier	Aluminum Nitride (AL	+S -S	Aluminum Nitride (ALN	24304-00-5		0.115782g			950,00
			+M -M	Thick Film Resis	0.000708g	+C	-C	Supplier	Ruthenium(IV) dioxid	+S -S	Ruthenium(IV) dioxide (12036-10-1		0.000349g			493,60
						+C	-C	Supplier	Boron Oxide (BO)	+S -S	Boron Oxide (BO)	1303-86-2		0.000095g			134,60
						+C	-C	Supplier	Magnesium Oxide (M	+S -S	Magnesium Oxide (MgO	1309-48-4		0.000068g			96,200
						+C	-C	Supplier	Zinc oxide (ZnO)	+S -S	Zinc oxide (ZnO)	1314-13-2		0.000063g			89,700
						+C	-C	Supplier	Aluminum Oxide (Al2	+S -S	Aluminum Oxide (Al2O3	1344-28-1		0.000095g			134,60
						+C	-C	Supplier	Silicon Dioxide (SiO2	+S -S	Silicon Dioxide (SiO2)	14808-60-7		0.000036g			51,300
			+M -M	Conductor	0.002107g	+C	-C	Supplier	Silver (Ag)	+S -S	Silver (Ag)	7440-22-4		0.001918g			910,00
						+C	-C	Supplier	Titanium (Ti)	+S -S	Titanium (Ti)	7440-32-6		0.000158g			75,000
						+C	-C	Supplier	Cobalt (Co)	+S -S	Cobalt (Co)	7440-48-4		0.000031g			15,000
			+M -M	Protective Glaze	0.002268g	+C	-C	Supplier	Boron Oxide (BO)	+S -S	Boron Oxide (BO)	1303-86-2		0.000200g			88,296
						+C	-C	Supplier	Chromium(III) oxide (+S -S	Chromium(III) oxide (Cr	1308-38-9		0.000013g			5,851
						+C	-C	Supplier	Zinc oxide (ZnO)	+S -S	Zinc oxide (ZnO)	1314-13-2		0.000600g			264,88
						+C	-C	Supplier	Aluminum Oxide (Al2	+S -S	Aluminum Oxide (Al2O3	1344-28-1		0.000060g			26,493
						+C	-C	Supplier	Silicon Dioxide (SiO2	+S -S	Silicon Dioxide (SiO2)	14808-60-7		0.000060g			26,493
						+C	-C	Supplier	Molybdenum (Mo)	+S -S	Molybdenum (Mo)	7439-98-7		0.000533g			235,19
						+C	-C	Supplier	Cobalt (Co)	+S -S	Cobalt (Co)	7440-48-4		0.000400g			176,39
						+C	-C	Supplier	*Proprietary Blue Pig	+S -S	*Proprietary Blue Pigme	Proprietary		0.000266g			117,59
						+C	-C	Supplier	*Proprietary Metal Co	+S -S	*Proprietary Metal Com	Proprietary		0.000133g			58,798
			+M -M	Part Marking Ink	0.000094g	+C	-C	Supplier	Titanium dioxide (TiO	+S -S	Titanium dioxide (TiO2)	13463-67-7		0.000080g			857,10
						+C	-C	Supplier	Silica amorphous (Si	+S -S	Silica amorphous (SiO2	7631-86-9		0.000013g			142,90
			+M -M	Nickel Plating	0.001539g	+C	-C	B	Nickel (Ni)	+S -S	Nickel (Ni)	7440-02-0		0.001539g			1,000,0

+M	-M	Tin Plating	0.000480g	+C	-C	Supplier	Tin (Sn)	+S	-S	Tin (Sn)	7440-31-5	0.000480g			999,92
----	----	-------------	-----------	----	----	----------	----------	----	----	----------	-----------	-----------	--	--	--------