



# Material Composition Declaration

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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 <a href="http://www.ipc.org/IPC-175x">http://www.ipc.org/IPC-175x</a>	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
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## Supplier Information

Company Name * Anaren Microwave	Company Unique ID	Unique ID Authority	Response Date * 2020-05-12	Response Document ID				
Contact Name * Sarvesh Nair	Title - Contact Project Engineer	Phone - Contact * 315-233-5510	Email - Contact * Sarvesh.Nair@ttm.com					
Authorized Representative * Sarvesh Nair	Title - Representative Project Engineer	Phone - Representative * 315-233-5510	Email - Representative * Sarvesh.Nair@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
	A150N50X4C	150W CHIP TERMINATION	2020-05-12	C		0.1828327	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 Other	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 3
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Comments

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

Save the fields in this form to a file

Export Data

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Import Data

Locked

## 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 & 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
												-	+	
	A150N50X4C	Conductor	0.003882g		Supplier	Cobalt (Co)	Cobalt (Co)	7440-48-4		0.000734g				189,23
					Supplier	Silver (Ag)	Silver (Ag)	7440-22-4		0.002907g				749,03
					Supplier	Titanium (Ti)	Titanium (Ti)	7440-32-6		0.000239g				61,733
	Plating		0.004893g		Supplier	Tin (Sn)	Tin (Sn)	7440-31-5		0.002825g				577,53
					B	Nickel (external applic	Nickel	7440-02-0		0.002067g				422,46
	Dielectric		0.173655g		Supplier	Molybdenum (Mo)	Molybdenum (Mo)	7439-98-7		0.000915g				5,273
					Supplier	Aluminum Nitride (Al	Aluminum Nitride (AlN)	24304-00-5		0.000915g				932,75
					Supplier	Aluminum Oxide (Al2	Aluminum Oxide (Al2O3)	1344-28-1		0.161977g				753
					Supplier	Boron Oxide (BO)	Boron Oxide (BO)	1303-86-2		0.000294g				1,693
					Supplier	Chromium(III) oxide (	Chromium(III) oxide (Cr	1308-38-9		0.000015g				89
					Supplier	Magnesium oxide (Mg	Magnesium oxide (MgO)	1309-48-4		0.000057g				332
					Supplier	Ruthenium(IV) dioxid	Ruthenium(IV) dioxide (	12036-10-1		0.000207g				1,196
					Supplier	Silicon dioxide (SiO2	Silicon dioxide (SiO2)	14808-60-7		0.000093g				537
					Supplier	Titanium dioxide (TiO	Titanium dioxide (TiO2)	13463-67-7		0.000000mg				0
					Supplier	Yttrium (III) oxide (Y2	Yttrium (III) oxide (Y2O3)	1314-36-9		0.008525g				49,092
					Supplier	Zinc oxide (ZnO)	Zinc oxide (ZnO)	1314-13-2		0.000751g				4,327
					Supplier	Proprietary Metal Com	Proprietary Metal Comp	Proprietary		0.000228g				1,318
					Supplier	Proprietary Blue Pigm	Proprietary Blue Pigme	Proprietary		0.000457g				2,636