

 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 * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information																																									
Supplier Information																																												
Company Name * Littelfuse Inc.	Company Unique ID	Unique ID Authority	Response Date * 2019-06-10	Response Document ID																																								
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<table border="1"> <tr> <th data-bbox="34 835 293 856">Requester Item Number</th> <th data-bbox="293 835 553 856">Mfr Item Number</th> <th data-bbox="553 835 813 856">Mfr Item Name</th> <th data-bbox="813 835 943 856">Effective Date</th> <th data-bbox="943 835 1008 856">Version</th> <th data-bbox="1008 835 1203 856">Manufacturing Site</th> <th data-bbox="1203 835 1333 856">Weight *</th> <th data-bbox="1333 835 1430 856">UOM</th> <th data-bbox="1430 835 1596 856">Unit Type</th> </tr> <tr> <td data-bbox="34 856 293 888">Q4010LTTP_TO220L</td> <td data-bbox="293 856 553 888">Q4010LTTP_TO220L</td> <td data-bbox="553 856 813 888">Triac 10A TO220L</td> <td data-bbox="813 856 943 888">2004-01-11</td> <td data-bbox="943 856 1008 888"></td> <td data-bbox="1008 856 1203 888">China</td> <td data-bbox="1203 856 1333 888">2,206.0761607</td> <td data-bbox="1333 856 1430 888">mg</td> <td data-bbox="1430 856 1596 888">Each</td> </tr> <tr> <td colspan="9" data-bbox="34 888 1596 919"> <table border="1"> <tr> <td data-bbox="34 888 293 919">Alternate Recommendation</td> <td colspan="8" data-bbox="293 888 1596 919">Alternate Item Comments</td> </tr> </table> </td> </tr> </table>	Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type	Q4010LTTP_TO220L	Q4010LTTP_TO220L	Triac 10A TO220L	2004-01-11		China	2,206.0761607	mg	Each	<table border="1"> <tr> <td data-bbox="34 888 293 919">Alternate Recommendation</td> <td colspan="8" data-bbox="293 888 1596 919">Alternate Item Comments</td> </tr> </table>									Alternate Recommendation	Alternate Item Comments															
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Terminal Plating / Grid Array Material Matte Tin (Sn)	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 1																																							
Comments The old exemption 5 has been replaced by Exemption 7(c)-1, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors.																																												

* Required Field

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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	EL-2006/690/EC
	5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
	7a. Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

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

Lya C. Latoza

DN: cn=Lya C. Latoza, o, ou, email=llatoza@iteelfuse.com, c=PH
Date: 2019.06.10 13:58:09 +0800

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
												-	+	
	Triac 10A TO220L	Heatsink/Lead fr	1,570.24	mg		Supplier	CuFeP							
							Copper (Cu)	7440-50-8		1,567.26	mg			
							Iron (Fe)	7439-89-6		2.355370	mg			
							Phosphorus (P)	7723-14-0		0.628098	mg			
	Outside Lead Fir	49.1666	mg		Supplier	Tin (Sn)	Tin (Sn)	7440-31-5		49.1666	mg			
	Die attach (Solder)	2.542	mg		Supplier	(F367SN3-90M3)	Tin (Sn)	7440-31-5		0.066092	mg			
							Rosin	65997-05-9		0.15252	mg			
							Other	SYSTEM		0.061008	mg			
					A	Lead/Lead Compound	Lead	7439-92-1	7a. Lead	2.26238	mg			890,00
	Die attach (Solder)	1.916	mg		Supplier	(Pb92.5Sn5Ag2.5)	Tin (Sn)	7440-31-5		0.0958	mg			
							Sliver	7440-22-4		0.0479	mg			
					A	Lead/Lead Compound	Lead	7439-92-1	7a. Lead	1.7723	mg			925,00
	Chip	9.29732	mg		Supplier	Silicon (Si)	Silicon (Si)	7440-21-3		9.039642	mg			
					B	Nickel (external applic	Nickel	7440-02-0		0.257678	mg			
	Chip Passivation	0.40741	mg		Supplier	SiO2	SiO2	7631-86-9		0.203705	mg			
					Supplier	PbO	PbO	1317-36-8	5. Lead i	0.181071	mg			444,43
					Supplier	Al2O3	Al2O3	1344-28-1		0.004526	mg			
					Supplier	Boron	Boron	7440-42-8		0.005613	mg			
					Supplier	Oxygen	Oxygen	7782-44-7		0.012493	mg			
	Ceramic Substra	76.6666	mg		Supplier	Ceramic	Al2O3	1344-28-1		70.955	mg			
							Misc., not to declare	SYSTEM		5.711666	mg			
	Molding Compound	495.833	mg		Supplier	Moulding Compound	Epoxy Cresol Novolac	29690-82-2		74.375	mg			
							Phenol Novoloac	9003-35-4		24.79166	mg			
							Metal hydroxide	SYSTEM		74.375	mg			

Carbon black	1333-86-4		4.958333mg			
Silica Fused	60676-86-0		317.3333mg			

* Required Field

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