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PPAP Package for:

**Newark Electronics
Customer Part Number: 40Y0883
(TE Connectivity Part Number: 2-1703930-1)
November 2018**

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Nondisclosure Agreement

If a nondisclosure agreement has been reached with your company, it will be included on the following page(s). Please review the terms of this agreement to ensure that further actions associated with information contained within this PPAP package do not violate these terms.

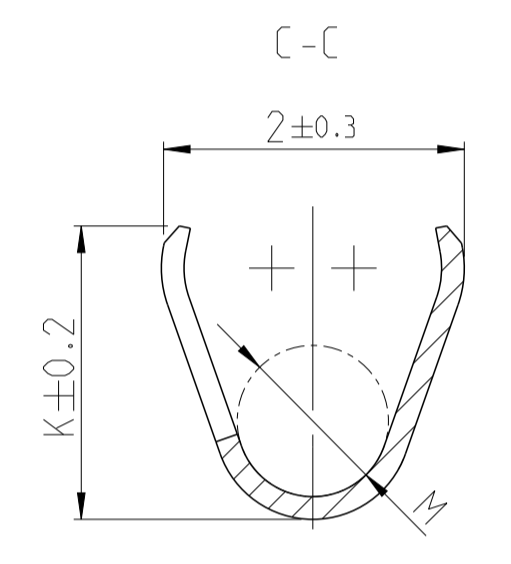
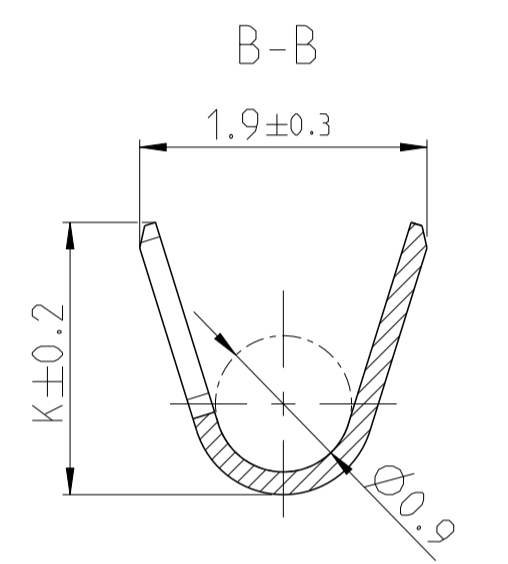
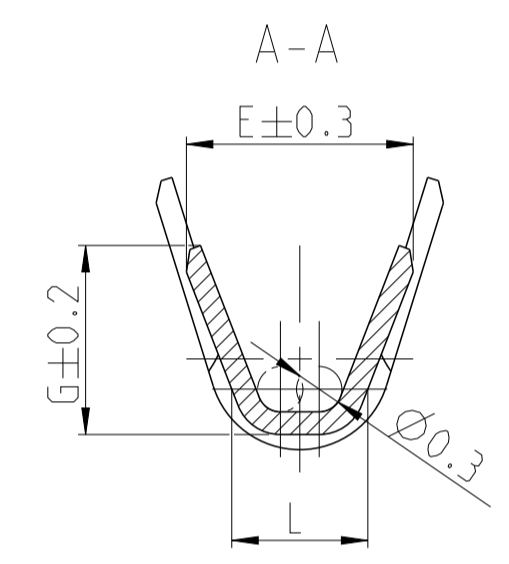
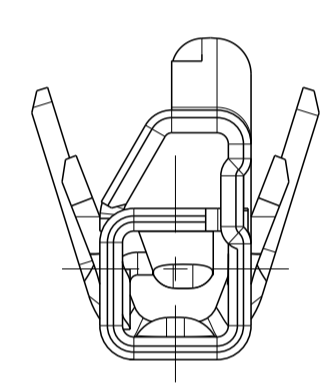
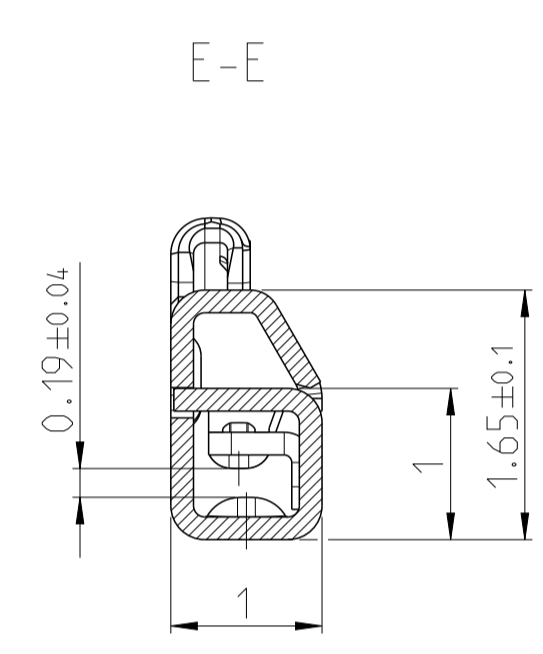
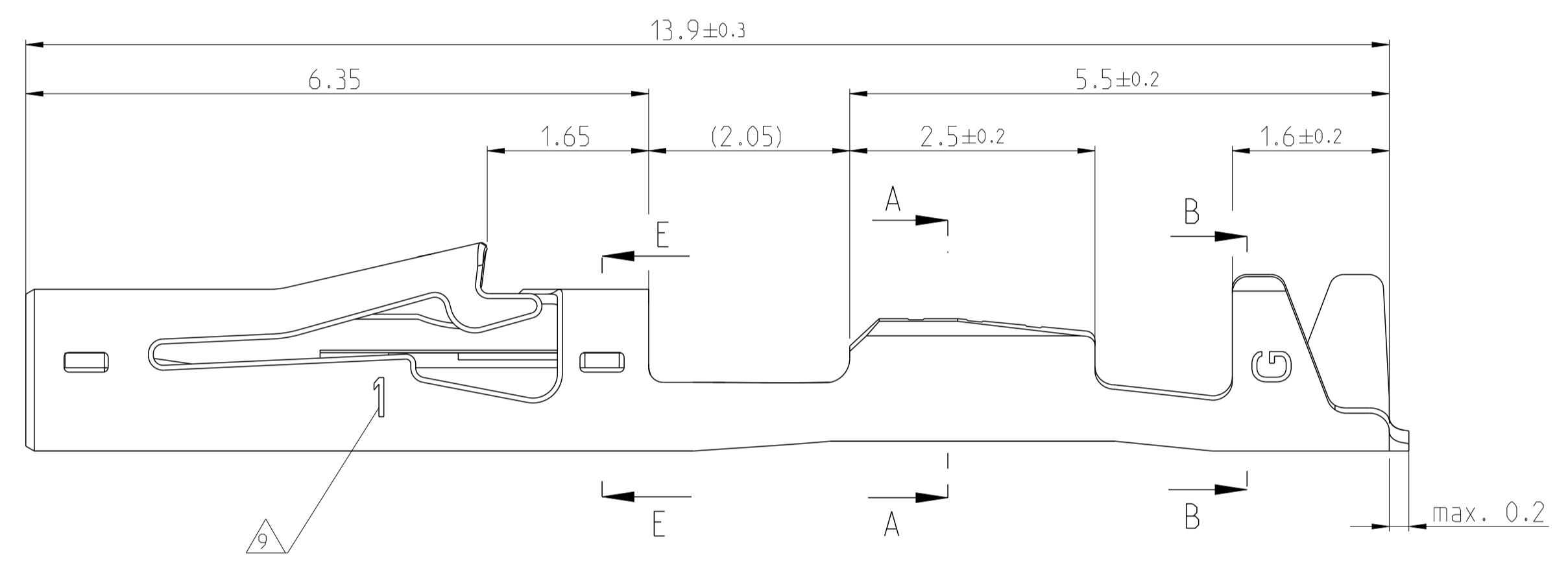
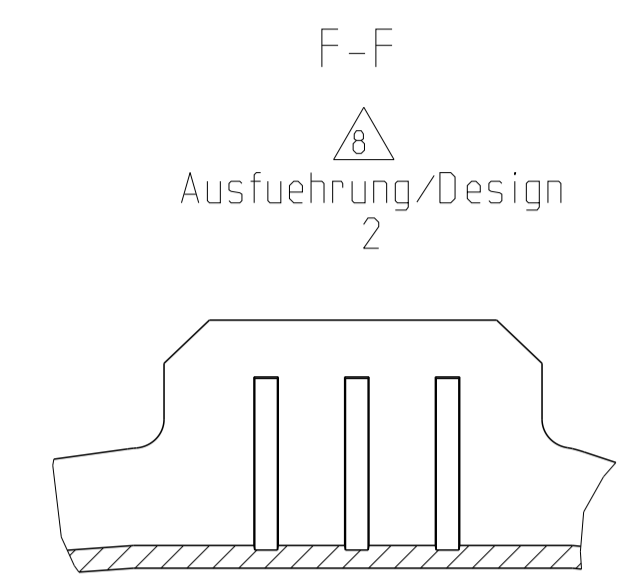
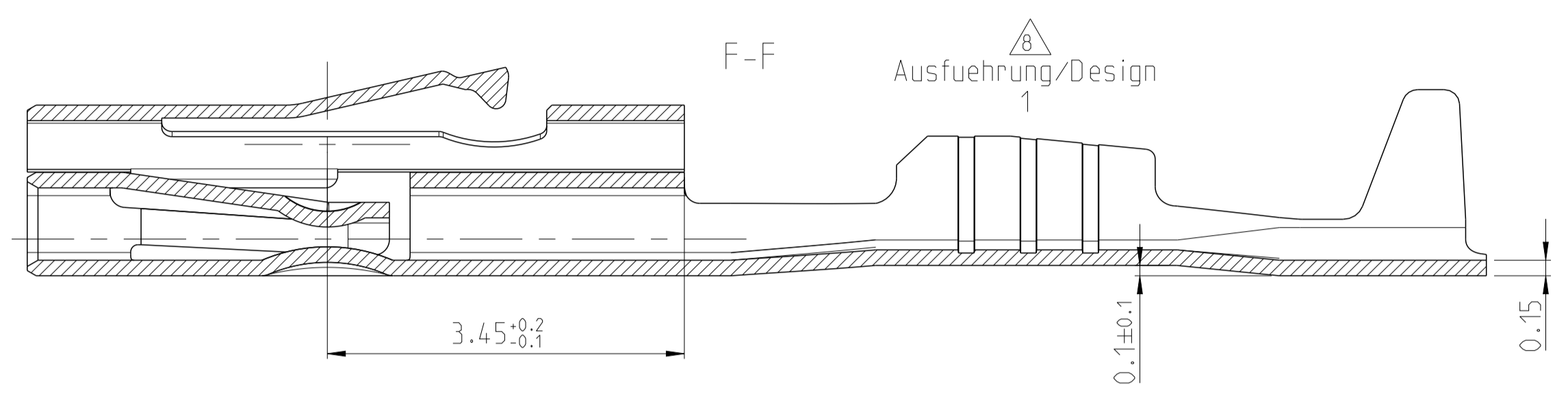
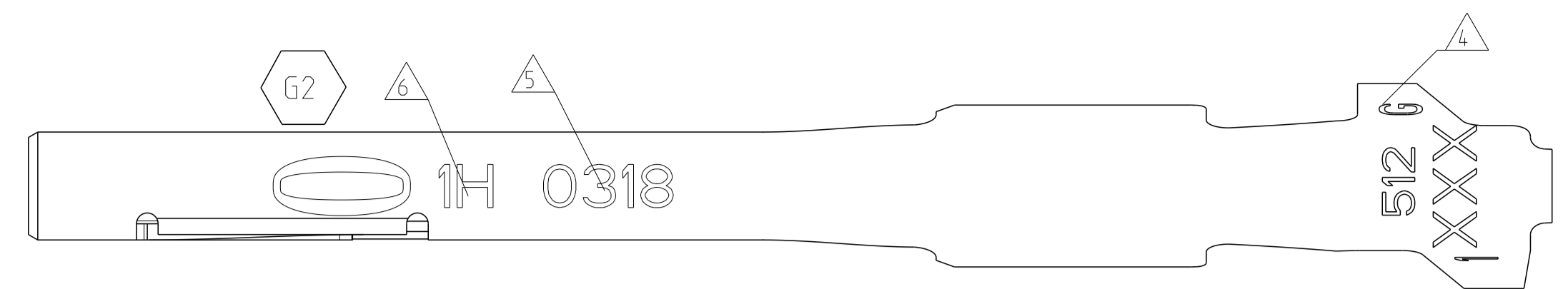
If a nondisclosure agreement HAS NOT been reached, certain documents deemed confidential by TE Connectivity will not be included in this PPAP package. These documents include but are not limited to the Design FMEA, the Process Flow Diagram, the Process FMEA and the Control Plan. These documents can be reviewed by you company but cannot be retained.



Section 1

Design Records

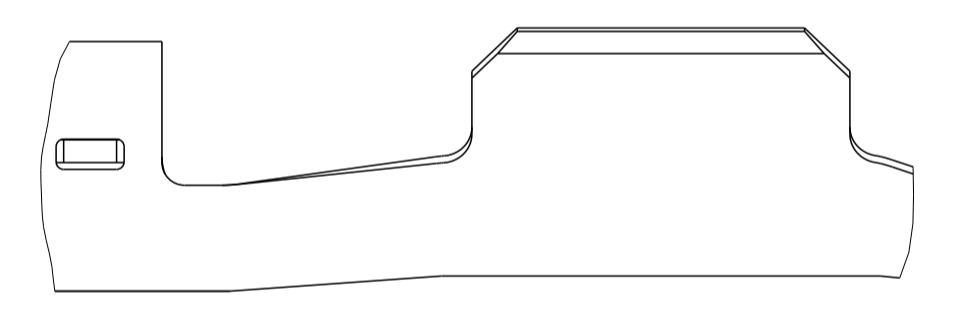
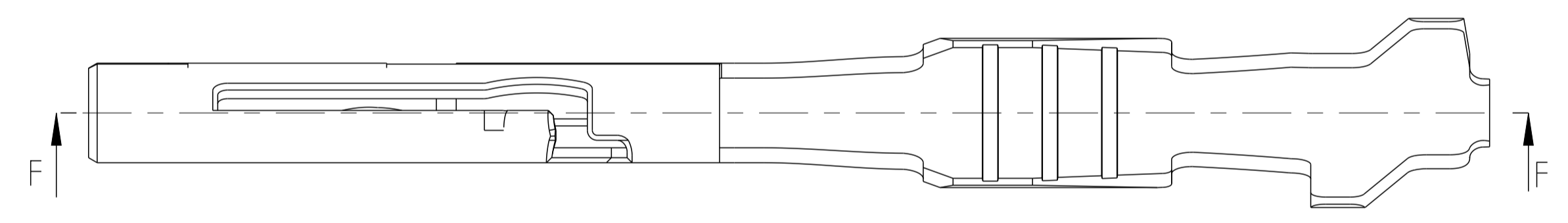
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A1	-	F	21JAN2016	HO.	LEIM	
		G	25NOV2016	HO.	LEIM	
		G1	19FEB2018	FRAN	LEIM	
		G2	04DEC2018	GLUE	LEIM	



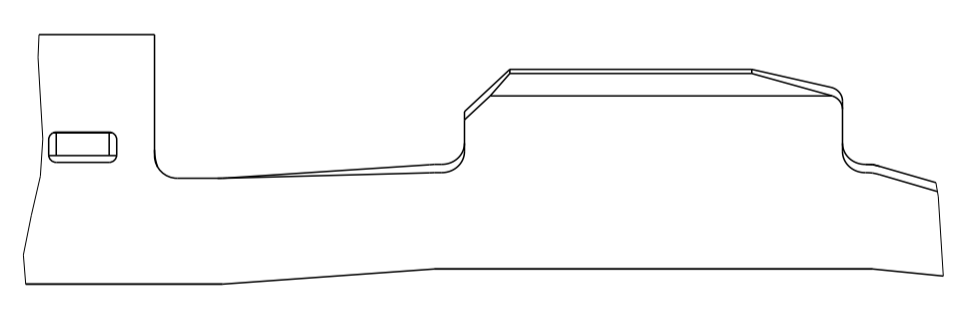
1-1703930-X wie gezeigt
1-1703930-X AS SHOWN

1-1703930-x und
2-1703930-x wie gezeigt
1-1703930-x AND
2-1703930-x AS SHOWN

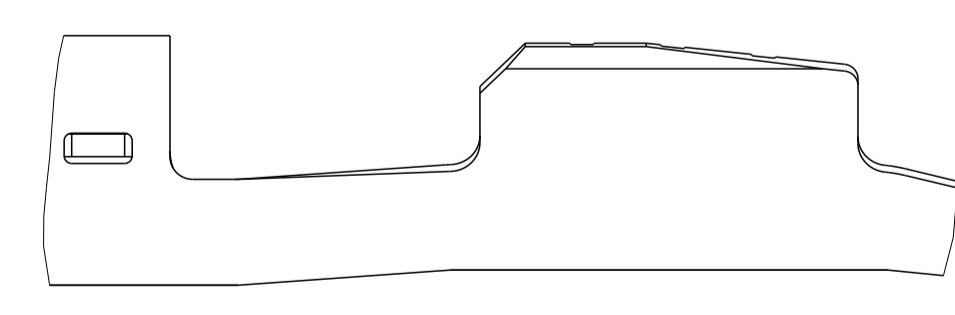
3-1703930-x und
4-1703930-x wie gezeigt
3-1703930-x AND
4-1703930-x AS SHOWN



4-1703930-X wie gezeigt
4-1703930-X AS SHOWN

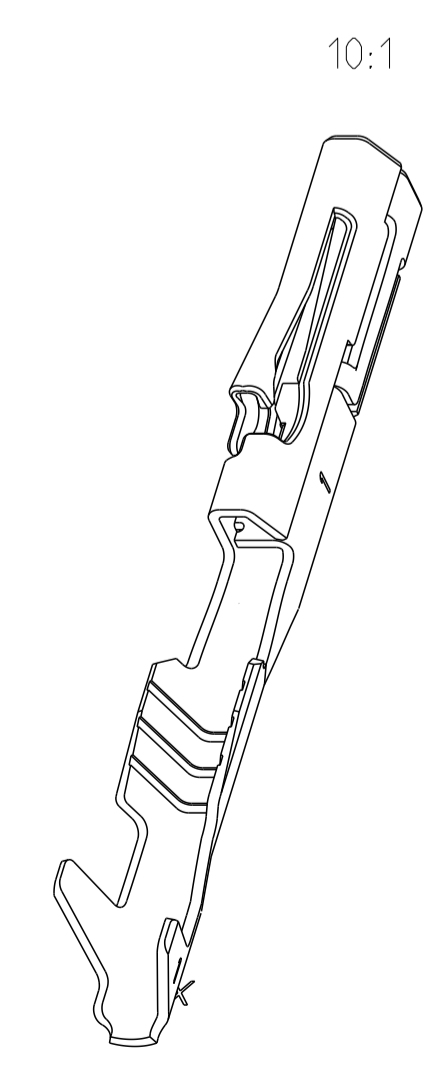


3-1703930-X wie gezeigt
3-1703930-X AS SHOWN



2-1703930-X wie gezeigt
2-1703930-X AS SHOWN

REV.	VERSION	MARKIERUNG MARKING	DGB WIRE SIZE RANGE [mm ²]	MATERIAL	OBERFLAECHE SURFACE	Gewicht WEIGHT [g]	Drahtcrimp WIRE CRIMP	Iso' crimp INSULATION CRIMP			
-	4-1703930-4	A	4+	CuNiSi	Sn	0.22...0.35	E = 1.6 G = 1.64 L = 0.85 M = Ø1	K = 1.93			
-	4-1703930-3	A	4G	CuNiSi	Au						
-	4-1703930-2	A	4H	CuNiSi	Ag						
-	4-1703930-1	A	Standard	4	CuSn8	Sn	0.13...0.17	K = 1.8			
-	3-1703930-4	A	3+	CuNiSi	Sn						
-	3-1703930-2	A	3H	CuNiSi	Ag	0.08	E = 1.41 G = 1.32 L = 0.75 M = Ø0.9	K = 1.8			
2-1703930-4	A	-	2+	CuNiSi	Sn	0.22...0.35	E = 1.7 G = 1.5 L = 1.05	K = 1.9			
2-1703930-2	G	-	2H	CuNiSi	Ag						
2-1703930-1	F	-	Standard	2	CuSn8				Sn		
1-1703930-2	F	-	1H	CuNiSi	Ag	0.13...0.17	E = 1.5 G = 1.25 L = 0.9	K = 1.8			
1-1703930-1	E	-	Standard	1	CuSn8				Sn		
Bestell-Nr. ORDER NO. Design 1	REV.	Bestell-Nr. ORDER NO. Design 2	REV.	VERSION	Markierung MARKING	DGB WIRE SIZE RANGE [mm ²]	MATERIAL	OBERFLAECHE SURFACE	Gewicht WEIGHT [g]	Drahtcrimp WIRE CRIMP	Iso' crimp INSULATION CRIMP
										Abmessungen/DIMENSION [mm]	



THIS DRAWING IS A CONTROLLED DOCUMENT. DWG: S.G., 04SEP2007. CHK: C. Boemmel, 04SEP2007. APVD: D. Jetter, 04SEP2007. NAME: NanoMQS Buchsenkontakt SOCKET CONTACT. SIZE: A1. CAGE CODE: 114-10858. DRAWING NO.: 114-10858. SCALE: 20:1. SHEET: 1 OF 1. REV: G2. Customer Drawing. /KUNDENZEICHNUNG. SCALE MASSSTAB 20:1. SHEET BLATT 1 OF 1. REV: G2.



Section 2

Engineering Change Documents



Product Change Notification

Current Date: 05-Apr-2018

TE Connectivity

Product Change Notification: E-17-000743

PCN Date: 20-JAN-17

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

General Product Description:

NanoMQS socket contact

Description of Changes

Height of the transition area between wire crimp and body will be increased. (PN 2-1703930-1 and 2-1703930-2)

Other attachments:

[change notice](#)

Reason for Changes:

Product Improvement. Increasing the robustness of NanoMQS terminals PN 2-1703930-1 and 2-1703930-2 in the transition area between wire crimp and body to decrease the risk of damage during mounting of the terminals to the cavity.

Estimated Dates:

Last Order Date (Obsolete Parts Only):	First Date To Ship (Changed Parts Only):
	20-AUG-2017
Last Ship Date (Obsolete Parts Only):	Last Date for Mixed Shipments: (Changed Parts Only):
	No Mixed Shipments

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
2-1703930-1	NO					
2-1703930-2	NO					

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Current Revision	New Revision
1703930	F	



Section 3

Customer Engineering Approval



Not Applicable



Section 4

Design FMEA

**See Section A for nondisclosure conditions.
The Design FMEA, if included, is a Class II confidential document
belonging to TE Connectivity. A class II document may not be
further distributed and is subject to the conditions of the
nondisclosure agreement.**



Section 5

Process Flow Diagram

See Section A for nondisclosure conditions.

The Process Flow Diagram, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.



Section 6

Process FMEA

See Section A for nondisclosure conditions.

The Process FMEA, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.



Section 7

Control Plan

See Section A for nondisclosure conditions.
The Control Plan, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.

Section 8

Measurement System Analysis

Not Applicable

Section 9

Dimensional Results



Section 10

Material, Performance Test Results

Wieland-Werke AG D-89070 Ulm

TE Connectivity Germany GmbH
Pfnorstr. 1
64293 Darmstadt

Verladezone/Verladendr. : **000012/20550750**

Ihre Bestell-Nr.	: 2550111875
vom	: 14.11.2016
Ihre Materialnummer	: 705590-2 REV. D

Unsere Auftrags-Nr. : **20000815 001**
 Unsere Fertigungsauftrags-Nr. : **36488552**
 Unsere Prüflos-Nr. : 040005369817
 Unsere Lieferschein-Nr. : 82385575 010
 Liefermenge : 3.312,5 KG
 Datum : 13.06.2018

Abnahmeprüfzeugnis 3.1 nach EN 10204 : 2004

Halbzeug:
230 Band verzinkt SnPUR@
Werkstoff:
Wieland B18 CUSN8
Ausführung: 366 federhart, therm entspannt

Abmessungen:
 Maß A: 0,15 mm -0,005 +0,005
 Maß B: 17,9 mm -0,05 +0,05
 Maß C:
 Maß D:

Spezifikation: Revision/Ausgabedatum
 EN 1652
 TEC-112-20-4 Rev. AC
 TE Spec. 100-2158 Rev. C
 Temper H08 = R720

Bemerkungen:
Ihre Material-Nr.: 705590-2 REV. D

Chemische Zusammensetzung nach 3.1 EN 10204 : 2004

Die Summe der sonstigen Elemente entspricht der in der chemischen Norm genannten Vorgabe.

Cu Kupfer-Gehalt **Fe Eisen-Gehalt** **Pb Blei-Gehalt**
Ni Nickel-Gehalt **P Phosphor-Gehalt** **Sn Zinn-Gehalt**
Zn Zink-Gehalt

Prüfmerkmal	CU	FE	PB	NI	P	SN	ZN
Einheit	%	%	%	%	%	%	%
Minimum /Richtwert(R)					0,01	7,5	
Maximum/Richtwert(R)		0,1	0,02	0,2	0,4	8,5	0,2

Meßwerte:

Gussnummer

51892	Rest	< 0,1	< 0,02	< 0,2	0,04	7,9	< 0,2
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Abnahmeprüfzeugnis 3.1 nach EN 10204 : 2004

TE Connectivity Germany GmbH

Ihre Bestell-Nr.	: 2550111875
vom	: 14.11.2016
Ihre Materialnummer	: 705590-2 REV. D

Unsere Auftrags-Nr.	: 20000815 001
Unsere Fertigungsauftrags-Nr.	: **36488552**
Unsere Prüflos-Nr.	: 040005369817
Unsere Lieferschein-Nr.	: 82385575 010
Liefermenge	: 3.312,5 KG
Datum	: 13.06.2018

Mechanische Prüfmerkmale

<i>RP0,2</i> <i>A2"</i>	<i>Dehngrenze 0,2 %</i> <i>Bruchdehnung A2"</i>	<i>RM</i> <i>HV1</i>	<i>Zugfestigkeit Rm</i> <i>Härte Vickers HV1</i>
Prüfmerkmal	RP0,2	RM	A2" HV1
Einheit	MPa	MPa	%
Minimum /Richtwert(R)	685	720	9
Maximum/Richtwert(R)		825	225 R
			265 R

Meßwerte:

Probennummer

R5189	738	764	14	242
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Weitere Prüfungen

Prüfmerkmal	Einheit	Soll-Werte bzw. Richtwert (R)		Ist-Werte	
		Min.	Max.	Min.	Max.
elektrische Leitfähigkeit in IACS	%	9		13,7	13,7
Korngröße	µm		10	4	4
Grat (Schneid-, Sägegrat)	mm		0,015	0,005	0,005
Biegebarkeit 90 Grad parallel R=0,3	Ergebnis	gut			
Biegebarkeit 90 Grad quer R=0	Ergebnis	gut			
Biegebarkeit 180 Grad parallel R=0,525	Ergebnis	gut			
Biegebarkeit 180 Grad quer R=0,15	Ergebnis	gut			
Schichtdicke, Feuerverzinnung Reinzinn	µm	1	2	1,3	2

RA	Ra - arithm.Mittenrauhwert	RAVZ	Ra - arithm.Mittenrauhwert Beschichtung
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Prüfmerkmal	RA	RAVZ
Einheit	µm	µm
Minimum /Richtwert(R)		
Maximum/Richtwert(R)	0,3	0,35

Meßwerte:

Probennummer

R5189		< 0,35
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R5189_1	0,1	
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Section 11

Initial Process Studies



Not Applicable



Section 12

Qualified Laboratory Documentation



CERTIFICATE



This is to certify that

TE Connectivity Germany GmbH

Amperestr. 12-14
73499 Wört
Germany

has implemented and maintains a **Quality Management System**.

Scope:

Design and manufacturing of electronic and mechatronic components and connector systems

An audit, conducted and documented in a report, has verified that this quality management system fulfills the requirements of the following International Automotive Standard:

IATF 16949:2016

(with product design)

Certificate registration no.	515116 IATF16
Main certificate registration no.	515099 IATF16
Issuing date	2018-05-04
This certificate is valid until	2021-05-03
IATF No.	0303436



2-IAQ-QMG-01001

For and on behalf of DQS

Stefan Heintz
Managing Director, DQS GmbH

Michael Drechsel
Managing Director, DQS Holding GmbH



Annex to certificate registration no.: 515116 IATF16
IATF-No.: 0303436

TE Connectivity Germany GmbH

Amperestr. 12-14
73499 W8rt
Germany



Remote Location	Scope
515114 TE Connectivity Solutions GmbH Amperestr. 3 9323 Steinhach Switzerland	Logistics
515099 TE Connectivity Germany GmbH Amperestr. 12-14 64625 Bensheim Germany	Continuous Improvement, Customer Service, Human Resource, Internal Audit Management, Management Review, Policy making, Process Design, Product Design, Production Equipment Development, Purchasing, Quality System Management, Sales, Supplier Management
515515 TE Connectivity Germany GmbH Amperestr. 11 91550 Dinkelsbühl Germany	Logistics, Process design, Production equipment development
515110 Tyco Electronics France SAS 1 rue Ampère 95300 Pontoise France	Customer Service, Product Design, Sales
515514 Tyco Electronics AMP Italia Products S.r.l. Corso Fratelli Cervi 15 10093 COLLEGNO TORINO Italy	Aftersales, Sales



Annex to certificate registration no.: 515116 IATF16
IATF-No.: 0303436

TE Connectivity Germany GmbH

Amperestr. 12-14
73499 Wört
Germany



Remote Location	Scope
515115 TE Connectivity Morocco I Lot 60, Zone Franche Tangier 90 000 Tangier Morocco	Warehousing
525515 TE Connectivity Tunisia office Immeuble Lake Forum, 4 ème étage 5 rue de la feuille d'érable 1053 Tunis Tunisia	Warehousing



Reg. Number	14696 - T		
First issue date	2018-08-28	Last change date	2018-08-28
Valid Until	2021-08-27	IATF Number	0328089

Quality Management System Certificate
IATF 16949:2016

We certify that the Quality Management System of the Organization:

**Wieland-Werke AG, BU Engineered Products
Ulm**

Is in compliance with the standard IATF 16949:2016 for the following products/services:

Design and Manufacturing of Engineered Products (Assembled Parts, Components for eMobility and Slide Bearings made from Copper Alloys).

Chief Operating Officer
Giampiero Belcredi

Exclusions: None

This certificate is issued in conformity with IATF Rules – Fifth Edition.

Maintenance of the certification is subject to annual survey and dependent upon the observance of Kiwa Cermet Italia contractual requirements.

This certificate is composed of 1 page.

Wieland-Werke AG, BU Engineered Products Ulm

Certified Sites

- Graf-Arco-Straße, 36 89079 Ulm - Germany

Support Functions

Wieland-Werke AG Vöhringen - Wielandstraße, 26 89269 Vöhringen - Germany
(Information Technologies, Laboratory, Testing)

Wieland-Werke AG, Zentrale Ulm - Graf-Arco-Straße, 36 89079 Ulm - Germany
(Continuous improvement, Contract review, Finance, Human resources, Information technologies, Internal audit management, Laboratory, Maintenance, Policy making, Production equipment development, Quality system management, Testing)



CERTIFICATO



Section 13

Appearance Approval Report

Not Applicable



Section 14

Sample Product

**Sent in separate package
(if required)**



Section 15

Master Sample

Retained at manufacturing location

Section 16

Checking Aids

Not Applicable



Section 17

Records of Compliance with Customer-Specific Requirements

MDS Report

Substances of assemblies and materials

This report is for internal Automotive industry use only. Distribution to non-Automotive clients is a violation of the Terms of Use, and is not permitted unless a written permission was given by DXC Technology. Parsing is not allowed.

1. Company and Product Name

1.1 Supplier Data

Name [ID]: **Tyco Electronics GAD
[913]**

DUNS Number: **-**

Street/Postal Code: **Amperestr. 12-14**

Nat./ZipCode/City: **DE 64625 Bensheim**

Supplier Code: **-**

Contact Person: **IMDS Team (India)
Engineering Services**

- Phone: **-**

- Fax No.: **-**

- E-Mail Address: **imds@te.com**

1.2 Product Identification

Part/Item No.: **2-1703930-1**

Description: **NanoMQS, Terminal**

Report No.: **-**

Date of Report: **-**

Purchase Order No.: **-**

Bill of Delivery No.: **-**

Preliminary MDS: **No**

IMDS ID / Version: **129161804 / 7**

Node ID: **762126747**

MDS Status (Change Date): **Internally
released
(08/09/2018)**

MDS Report

















Substances of assemblies and materials

Materials which are subject to legal prohibitions must not be included!
Dangerous substances formed or released during use must also be declared
 Please note: GADSL list for substances that require declaration

2. Characterization of the Component

Part/Item No.: **2-1703930-1**
 Description: **NanoMQS, Terminal**

Report No.: **-**
 IMDS ID / Version: **129161804 / 7**
 Node ID: **762126747**

Tree Level	Description Article Name Name Substance name	Part/Item No. Item -/Mat.-No. Material-No. CAS No.	IMDS ID / Version	 Quantity	Weight [g]	Portion [%]	Portion (from - to) [%]	 Classif.  GADSL, SVHC	Parts Marking Recyclate (Indust./Consumer) Application [ID]
1	 NanoMQS, Terminal	 2-1703930-1	129161804 / 7		0.0795				
└2	 CuSn8		10279634 / 7		0.0792			 3.2	 No
└3	 Iron	 7439-89-6				0.05	0 - 0.1		
└3	 Nickel	 7440-02-0				0.1	0 - 0.2	 D	 Not applicable [34]
└3	 Phosphorus	 7723-14-0				0.205	0.01 - 0.4		

Tree Level	Description Article Name Name Substance name	Part/Item No. Item -/Mat.-No. Material-No. CAS No.	IMDS ID / Version	Quantity	Weight [g]	Portion [%]	Portion (from - to) [%]	Classif. GADSL, SVHC	Parts Marking Recyclate (Indust./Consumer) Application [ID]
3	Lead	7439-92-1				0.01	0 - 0.02	D / P / SVHC	Concentration w ithin acceptable GADSL limits [44]
3	Zinc (metal)	7440-66-6				0.1	0 - 0.2		
3	Tin	7440-31-5				8	7.5 - 8.5		
3	Misc., not to declare	system				0.1	0 - 0.2		
3	Copper	7440-50-8				91.435		D	
2	e-plate Sn (electrodeposited Tin Coatings, bright and matt)		756885 / 5		0.0003			4.2	No
3	Carbon	7440-44-0				0.505	0.01 - 1		
3	Sulphur	7704-34-9				0.02	0 - 0.04		
3	Lead	7439-92-1				0.015	0 - 0.03	D / P / SVHC	Concentration w ithin acceptable GADSL limits [44]
3	Tin	7440-31-5				99.46			
This is an uncontrolled copy of a document created by IMDS. End of the report.									



Section 18

Part Submission Warrant



Part Submission Warrant

Part Name NanoMQS SOCKET CONTACT Cust. Part Number 40Y0883
 Shown on Drawing Number C-1703930 Org. Part Number 2-1703930-1
 Engineering Change Level G2 Dated 04-OCT-2018
 Additional Engineering Changes n/a Dated n/a
 Safety and/or Government Regulation Yes No Purchase Order No. n/a Weight (kg) 0.00007
 Checking Aid Number n/a Checking Aid Engineering Change Level n/a Dated n/a

ORGANIZATION MANUFACTURING INFORMATIONTYCO ELECTRONICS AMP GMBH / 323462481

Organization Name and Supplier Code

AMPERESTR 14

Street Address

WOERT BW 73499 Germany
 City Region Postal Code Country

CUSTOMER SUBMITTAL INFORMATIONNewark Electronics

Customer Name/Division

N/A

Buyer/Buyer Code

Various

Application

MATERIALS REPORTING

Has customer-required Substance of Concern information been reported
 Submitted by IMDS or other customer format

Yes No n/a
129161804 / 7

Are polymeric parts identified with appropriate ISO marking codes?

Yes No n/a

REASON FOR SUBMISSION (Check at least one)

- | | |
|---|--|
| <input type="checkbox"/> Initial submission | <input type="checkbox"/> Change to Optional Construction or Material |
| <input type="checkbox"/> Engineering Change(s) | <input type="checkbox"/> Sub-Supplier or Material Source Change |
| <input type="checkbox"/> Tooling: Transfer, Replacement, Refurbishment, or additional | <input type="checkbox"/> Change in Part Processing |
| <input type="checkbox"/> Correction of Discrepancy | <input type="checkbox"/> Parts Produced at Additional Location |
| <input type="checkbox"/> Tooling Inactive > than 1 year | <input checked="" type="checkbox"/> Other - please specify |

E-17-000743**REQUESTED SUBMISSION LEVEL (Check one)**

- Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
 Level 2 - Warrant with product samples and limited supporting data submitted to customer.
 Level 3 - Warrant with product samples and complete supporting data submitted to customer.
 Level 4 - Warrant and other requirements as defined by customer.
 Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for dimensional measurement material and functional tests appearance criteria statistical process package
 These results meet all design record requirements: Yes No (If "No" - Explanation Required)
 Mold / Cavity / Production Process Stamping

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts, which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of proprietary / 8 hours
 I also certify that documented evidence of such compliance is on file and is available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS Production rate is TE proprietary.

Is each Customer Tool properly tagged and numbered? Yes No N/A

Organization Authorized Signature Barbara Figueroa Date 05-Nov-2018

Print Name Barbara Figueroa Phone No. +52 662 500 3680 Fax N/A

Title PPAP Technician Email barbara.figueroa@te.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

PPAP Warrant Disposition : Approved Rejected Other _____

Customer Signature _____ Date _____

Print Name _____ Customer Tracking Number (optional) _____



Section 18a

Bulk Material Requirements



Not Applicable