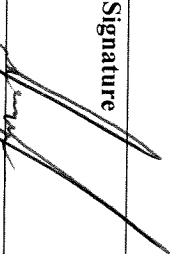

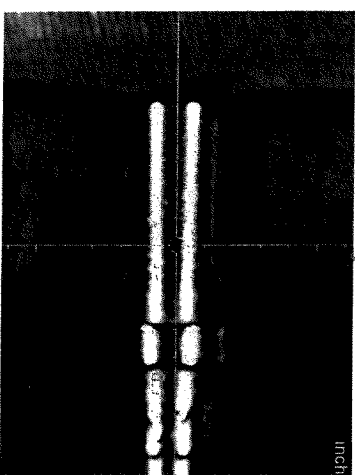


AS9102 Rev. B First Article Inspection
Form 2: Product Accountability – Materials, Special Processes and Functional Testing

1. Part Number 0462-005-2031 (REF. TSEI P/N: D18-2016-089)	2. Part Name CONTACT SOCKET SIZE 20	3. Serial Number N/A	4. FAIR Number TRI-19-684796
5. Material or Process Name	6. Specification Number	7. Code	8. Supplier
CONTACT BODY COPPER ALLOY	PER ASTM B250	N/A	BAOSHIDA SWISSMETAL
FINISH GOLD PLATE	PER MIL-DTL-45204 TYPE II, GRADE C	N/A	TRI-STAR EL SEGUNDO
NICKEL PLATE	PER AMS- QQ-N-290	N/A	TRI-STAR EL SEGUNDO
SLEEVE STAINLESS STEEL	PER ASTM A240-17	N/A	BROWN METALS COMPANY
PASSIVATION	PER AMS 2700 TYPE 6	N/A	BRAXTON CARIBBEAN
11. Functional Test Procedure Number	12. Acceptance report number		
ENGAGEMENT & SEPERATION FORCES	SEE ATTACHED RECEIPT		
HOOD RETENTION	SEE ATTACHED RESULTS		
13. Comments:			
14. Signature 		15. Date	
		7/25/2019	

1. Part Number 0462-005-2031 (REF. TSEI P/N: D18-2016-088)				2. Part Name CONTACT SOCKET SIZE 20			3. Serial Number N/A	4. FAIR Number TRI-19-684796
Characteristic Accountability				Inspection / Test Results				
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed/Qualified Tooling	11. Non-Conformance Number	14. Additional Data / Comments NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES AFTER PLATING	
1	SHEET 1	N/A	.005 ± .077	.076	COMPARATOR	N/A		
2	SHEET 1	N/A	DEUTSCH ID	CONFORMED	VISUAL	N/A		
3	SHEET 1	N/A	.015 ± .647	.647	COMPARATOR	N/A		
4	SHEET 1	N/AVISUAL	COLOR BAND	CONFORMED	VISUAL	N/A		
5	SHEET 1	N/A	.010 ± .165	.167	COMPARATOR	N/A		
6	SHEET 1	N/A	.020 ± .172	.177	COMPARATOR	N/A		
7	SHEET 1	N/A	.005 ± .030	.030	COMPARATOR	N/A		
8	SHEET 1	N/A	Ø .005 ± .100	.100	COMPARATOR	N/A		
9	SHEET 1	N/A	Ø .055 ± .076	.077	MICROMETER	N/A		
10	SHEET 1	N/A	Ø .055 ± .059	.057	PIN GAGE	N/A		
11	SHEET 1	N/A	NOTE 1	CONFORMED	N/A	N/A		
12	SHEET 1	N/A	NOTE 2	CONFORMED	N/A	N/A		
13	SHEET 1	N/A	NOTE 3	CONFORMED	N/A	N/A		
14	SHEET 1	N/A	NOTE 4	CONFORMED	N/A	N/A		
15	SHEET 1	N/A	NOTE 5	CONFORMED	N/A	N/A		
12. Signature: 							13. Date: 7/25/2019	
								

Tri-Star Electronics International
2201 Rosecrans Ave., El Segundo, CA 90245
www.carlisleit.com
Ph: (310) 536-0444



TR1-19-684796
TR-2016-088
5/19/19

TR-INTS
Au
Ni

Fischerscope® XRAY XDLM 237
Product: Au/Ni/PbNiCu Hard Gold
Lot Number: TR1-19-684796
Application: Au/Ni/PbNiCu

Machine ID: #0628 Date: 5/11/2019
Time: 1:13:50 PM Operator: 2297

n=	1	Au 1 =	12.4 p"	Ni 2 =	156 p"
n=	2	Au 1 =	12.4 p"	Ni 2 =	171 p"
n=	3	Au 1 =	13.7 p"	Ni 2 =	166 p"
n=	4	Au 1 =	13.4 p"	Ni 2 =	163 p"
n=	5	Au 1 =	13.6 p"	Ni 2 =	168 p"
n=	6	Au 1 =	12.3 p"	Ni 2 =	172 p"
n=	7	Au 1 =	13.4 p"	Ni 2 =	166 p"
n=	8	Au 1 =	14.7 p"	Ni 2 =	173 p"
n=	9	Au 1 =	13.4 p"	Ni 2 =	161 p"
n=	10	Au 1 =	14.8 p"	Ni 2 =	153 p"
n=	11	Au 1 =	13.3 p"	Ni 2 =	157 p"
n=	12	Au 1 =	12.4 p"	Ni 2 =	169 p"
n=	13	Au 1 =	12.6 p"	Ni 2 =	154 p"
n=	14	Au 1 =	13.6 p"	Ni 2 =	158 p"
n=	15	Au 1 =	13.0 p"	Ni 2 =	185 p"
n=	16	Au 1 =	14.9 p"	Ni 2 =	159 p"
n=	17	Au 1 =	13.7 p"	Ni 2 =	171 p"
n=	18	Au 1 =	12.4 p"	Ni 2 =	173 p"
n=	19	Au 1 =	12.1 p"	Ni 2 =	161 p"
n=	20	Au 1 =	13.7 p"	Ni 2 =	143 p"

Au 1 p" Ni 2 p"

Mean 13.3 164.0
Standard Deviation 0.85 9.43
CoV (%) 6.36 5.75
Minimum 12.1 ✓ 143 ✓
Maximum 14.9 185
Range 2.8 42.3
Number of readings 20 ✓ 20 ✓
Measuring time 15 sec Density (Au 1) 17.5 g/cm³
Collimator size 2 = 0.20 Dm. Calibration Standards Types Foil Standards
Measurement Mode X-Ray Fluorescence

1	-4.58
2	-5.28
3	-5.29
4	-5.94
5	-5.93
6	-4.53
7	-4.56
8	-4.44
9	-5.07
10	-6.87
11	-4.60
12	-5.06
13	-5.06

DIS-2016-088
880-9108
APR-19-684796

1	10.97
2	11.26
3	11.49
4	12.00
5	11.07
6	11.11
7	11.50
8	11.70
9	11.68
10	11.19
11	11.41
12	12.28
13	11.26

PART NO. :

DATE 2019/ 5/21
 TIME 23:25

NAME :

* RESULT * 13
 N
 MAX -4.44
 MIN -6.87
 R 2.43
 X -5.17
 dn 0.6855
 dn-1 0.7135

PART NO. :

DATE 2019/ 5/21
 TIME 23:23

NAME :

* RESULT * 13
 N
 MAX 12.28
 MIN 10.97
 R 1.31
 X 11.45
 dn 0.3661
 dn-1 0.3810



Hood Retention Test Form

DATE: 5-20-19

PART NUMBER: 118-2200-501 LOT #: 19-685012

REQUIREMENT: 3 C45

SAMPLE TEST RESULTS:

	<u>PASS</u>	<u>FAIL</u>
1. <u>15 C45</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. <u>15 C45</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. <u>15 C45</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. <u>15 C45</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. <u>15 C45</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

INSPECTOR'S STAMP OR OPERATOR'S BADGE NO.: 852569

Note: Place Results Inside Router Package

1 / TRI-STAR Electronics Europe SA (C or G)
 I certify that all articles in this shipment meet the requirements of the
 purchase order and applicable laws.

11 MAR 2019

DATE CODE: 1500
 SIGNATURE: [Signature]
 GENERAL MANAGER

TRI-STAR ELECTRONICS EUROPE SA
 Centro Nord-Sud, Stabile 3A
 Via Campagna
 CH-6934 BIOGGIO

BAOSHIDA SUISSMETAL

Inspection certificate 31 EN10204

Certif. ID: creation date: 2019/02/01
 I 0222916 - 40000202782
 Your customer no.:
 1 687
 Your order no. / date:
 808749 / 20181109
 Our delivery no. / date:
 80224333 000010 / 20190206
 Our order no. / date:
 0000161089 000010 / 20181108
 Production order / inspection lot / inspection lot creation date
 I 0222916 / 40000202782 / 2018/12/17

Weight: 4329,5 KG

Material: 2-13369-VRCA-1 / C97 BAR RON Ø2.665 L3000
 Product: - C19160

Length: Pointed and chamfered
 Dim 1: 3000 mm +30
 Alloy: 2,665 mm -0,025
 CUNI1PB1P

LOT # CT
19 - 298212

Characteristics	Baoshida Swissmetal		Norm	Results	Unit
	Min	Max			

Mechanical / physical and other properties
 Tensile Strength 620 700

N/mm²

Yield strength Rp 0,2 %

560

N/mm²

Elongation A 50

3

%

TRI-STAR ELECTRONICS EUROPE SA	Mat: <u>C97</u> <u>Ø2.665</u>
	PN <u>01620K08-1/A</u>
	PO <u>005606</u>
Ship. date	<u>11 MAR 2019</u>

664	662	642	673	667	634
616	623	603	634	616	592
4	4	4	4	4	4
5	5	4	4	4	5

This product has been manufactured under our quality-environment-management-system to ISO 9001 / 14001, BVQI, SCEN 003.

Baoshida Swissmetal Ltd.
 Route de Tavannes 4, CH-2732 Reconvilier
 Phone 032 4820 482 Fax 032 483 0 116 VAT 646771

BAOSHIDA

SUISSMETAL

Delivery position / date
80224333 000010/20190206

TRI-STAR ELECTRONICS EUROPE SA
Centro Nord-Sud, Stabile 3A
Via Campagna
CH-6934 BIOGGIO

Electrical conductivity

50

5
%IACS

Chemical composition (%)

Element	Value	Rem	Unit
Copper - Remaining	0,8	1,0	%
Lead	0,00	0,00	%
Iron	0,00	0,00	%
Tin	0,8	1,0	%
Nickel	0,00	0,05	%
Zinc	0,00	0,05	%
Cadmium	0,000	0,000	%
Phosphor	0,15	0,26	%
Others-C4	0,00	0,09	%

Baoshida Swissmetal Ltd S.Texier. The certificate is electronically made out of SAP and is valid without signature. The products supplied are in compliance with the requirements of the order.

LOT # CT
19-298212

This product has been manufactured under our quality-environment-management-system to ISO 9001 /14001, BVC SGSsm 003.

Baoshida Swissmetal Ltd.
R te de Tavannes 4, CH-2732 Reconville
Phone 032 482 0 482 Fax 032 483 0 116 VAT 646771



Braxton Caribbean Mfg. Co, Inc.
CONFIDENTIAL AND PROPRIETARY

CERTIFICATE OF CONFORMANCE

<u>PURCHASE ORDER NUMBER</u>	<u>QUANTITY</u>	<u>PART NUMBER</u>
610918	388.800	H-901-1 REV.K
<u>LOT NUMBER</u>	<u>PACKING SLIP NUMBER</u>	
03041924	55876	
<u>MATERIAL TYPE</u>	<u>PART DESCRIPTION</u>	
305 SS/312558	HOOD SOCKET	

CUSTOMER

TRI STAR ELECTRONICS

The following statement is not binding upon Braxton Caribbean Mfg Co. Inc. and is listed as required for Tri-Star company obligations: Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700.

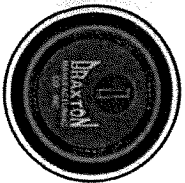
"It is hereby certified that all articles in the above shipment and in the quantities stated are in conformance with the stated specifications and dimensions on customer furnished blueprint. Test reports pertaining to same are on file and subject to examination."

Braxton Caribbean Mfg Co Inc.
2641 Walnut Ave.
Tustin, CA 92780

3/07/2019
DATE

Bob Casner
QUALITY MANAGER / DESIGNEE

CT - 19 - 297970



Braxton Caribbean Mfg. Co, Inc.
CONFIDENTIAL AND PROPRIETARY

CERTIFICATE OF PASSIVATION

<u>PURCHASE ORDER NUMBER</u>	<u>QUANTITY</u>	<u>PART NUMBER</u>
610918	388.800	H-901-1 REV.K
<u>LOT NUMBER</u>	<u>PACKING SLIP NUMBER</u>	
03041924	55876	
<u>MATERIAL TYPE</u>	<u>PART DESCRIPTION</u>	
305 SS/312558	HOOD SOCKET	

CUSTOMER
TRI STAR ELECTRONICS

The following statement is not binding upon Braxton Caribbean Mfg Co, Inc. and is listed as required for Tri-Star company obligations: Seller hereby acknowledges that the parts and/or materials being shipped under this order are intended for use under Boeing's Federal Aviation Administration (FAA) issued Production Certificate 700.

"It is certified that all articles in the above shipment were passivated per AMS2700 TYPE 6"

Braxton Caribbean Mfg Co Inc.
2641 Walnut Ave.
Tustin, CA 92780

3/07/2019
DATE

Bob Cannon
QUALITY MANAGER / DESIGNEE

CT - 19 - 297970



8635 White Oak Avenue
 Rancho Cucamonga, CA 91730
 Tel: (909) 484-3124 / (800) 992-5015
 FAX: (909) 484-1085
 Web: www.brownmetals.com | www.slidecuts.com

Certificate of Test / Conformance
 Certificate Number: 196890-2

BMC Lot Receipt
 16-404

Customer:	BRAXTON MANUFACTURING CO INC		
Material:	C.R. Stainless Steel	Customer PO#:	M3467
Type:	305	Date Shipped:	1/23/2019
Finish:	2BA Ra:12 jin.	Sales Order #:	251447
Size:	.0065 X .804"	Supplier Source (1):	Somarc Thin Strip (USA)
No. of Coils:	14	Melt Mill Source (1):	Outokumpu (Finland)
Net Weight:	1,330,000#	Heat Number:	312558

UNS Number:	S30500
Specifications:	AWS-5514H ASTM-A-240-17

MECHANICAL PROPERTIES	
Condition/Temper	Annealed
Hardness(2)	VHN151 (B 80)
Ultimate Tensile Strength(3)	90,000/92,000
Yield Strength @ .2% offset(3)	38,000/40,000
Percent Elongation in 2 inches	68.0/71.0 %
Bend Test	OK
Embrittlement (ASTM-A-262 Pr. B)	
ASTM Grain Size	9.0

CHEMICAL PROPERTIES												
C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	TI	Fe	V
.04	1.18	.023	.001	.46	18.30	12.40	.05	.11	.021	.01	Bal	.06

(1) Country of Origin specified in parenthesis. Material complies with DFARS Sections 252.225-7008 & 252.225-7009 (JUL 2009) if melted in the USA or a qualifying country according to DFARS. (2) Hardness conversion using ASTM-E-140. (3) Tensile & Yield Strength reported in PSI. (4) If requested, tolerances, camber and other measurement readings are reported in inches.

Date: January 23, 2019

Anthony Schlumpf
 Brown Metals Company Quality Control Clerk

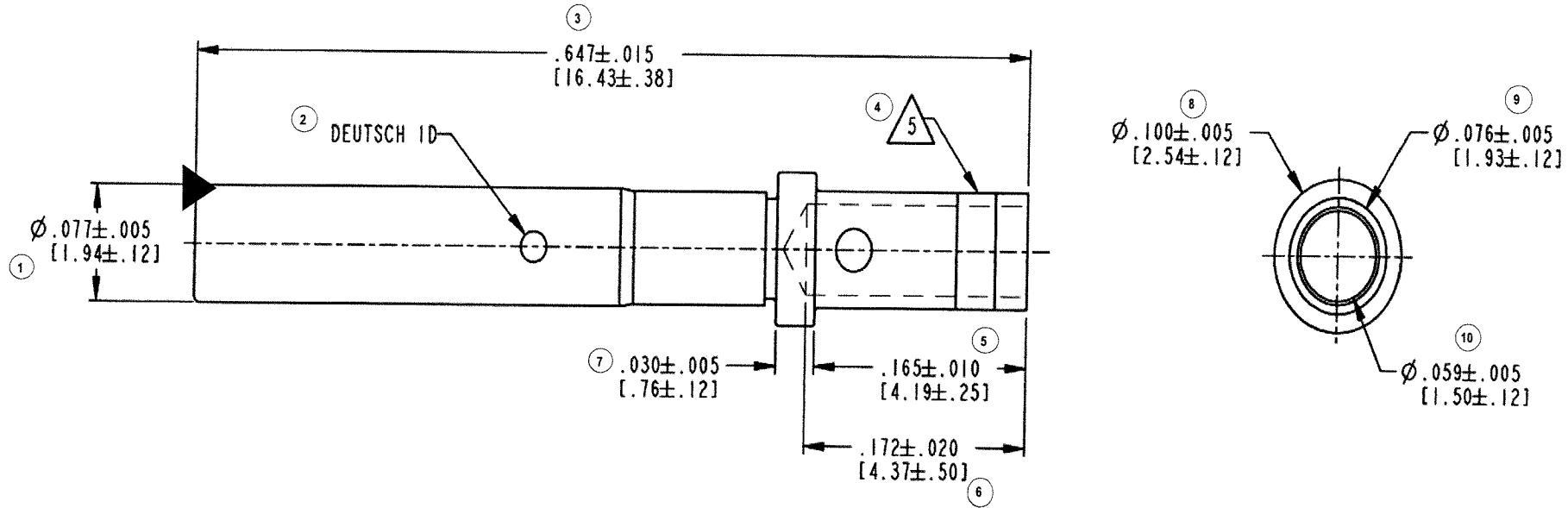
Brown Metals Company is an AS9100 and ISO9001 registered company. Please visit www.brownmetals.com/compliance for OSHA, AS9100, ISO9001, MSDS, ROHS, REACH, Mercury Free and other statements of compliance. No welds/weld repairs performed except for oscillate wound coils/spools when agreed upon by the customer. The mechanical and chemical properties on this certificate are derived directly from the manufacturer's Certificate of Test (available upon request). We certify that the information contained on this certificate is a true copy of the data on file and that the material conforms to the specifications listed. This Certificate of Test / Conformance shall not be reproduced except in full. Federal law prohibits the recording of false, fictitious, or fraudulent statements or entries on the certificate and may be punishable as a felony under Federal law.
 Original Issue: 1/23/2019 Revised: 1/25/2019 7:43:57 AM Revised By: KAL Reprinted: 1/25/2019 7:44:23 AM Version: 16.04.06

VERIFIED
 by SARA
 date 1/28/19

CT - 19 - 297970

REV B 0462-005-20**

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
NC	NEW RELEASE PER E.O. P19622	9-19-07	R.D.R.
A	REVISED PER E.O.P20270	7-27-09	R.D.R.
B	REVISED PER E.O.P21283	1-25-12	RDR



- 15 SOCKET CONTACT IS IDENTIFIED BY A SINGE PURPLE STRIPE.
- 14 4. FOR CONTACT PERFORMANCE AND APPLICATION CHARACTERISTICS SEE DRAWING 0425-015-0000.
- 13 3. THIS CONTACT MAY BE CRIMPED WITH HDP-400 POWER PRESS OR HDT-48-00 HAND TOOL. SEE DRAWING 0425-205-0000 FOR APPLICABLE WIRE SIZE AND CRIMPING INFORMATION.
- 12 2. WHEN ** = 31: GOLD OVER NICKEL OVER COPPER
WHEN ** = 141: NICKEL OVER COPPER
WHEN ** = 309: TIN OVER NICKEL OVER COPPER
- 11 1. DIMENSIONS ARE IN INCHES [mm]

NOTES: UNLESS OTHERWISE SPECIFIED

SIGNATURE & DATE	
DR	D. MEYER 09-14-07
CHK	D. MEYER 12/23/12
PE	D. MEYER 12/23/12
APPD	R. Ried 2-3-12
SCALE	NONE
WT	

CONTACT SOCKET
SIZE 20
16-18 AWG

ENVELOPE

EP	MATL. CODE
3850 INDUSTRIAL AVE. HEMET, CA 92545	
B 0462-005-20**	
DWG SIZE	SHEET OF



REV
P 0425-015-0000

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
L	REVISED PER E.O. P19436	12-18-06	R.D.R.
M	REVISED PER E.O. P19666	11-6-07	R.D.R.
N	REVISED PER E.O. P19847	5-14-08	R.D.R.
P	REVISED PER E.O. P20416	1-8-10	ADP

SOLID CONT. SIZE	SOLID CONTACT PART NO's (PARTIAL LIST)		WIRE SIZE AWG [mm ²]	RECOMMENDED STRIP LENGTH INCHES [mm]	MIN CONT. RETENTION LBS [N]	REF CRIMP TENSILE LBS [N]	MAX RATED AMPS @ 125°C CONTINUOUS
	PIN	SOCKET					
4	5960-203-04**	5962-203-04**	4 [21.0]	.430-.492 [10.92-12.50]	35 [156]	300 [1334]	100
4	0460-204-04**	0462-203-04**	6 [13.0]	.430-.492 [10.92-12.50]	35 [156]	300 [1334]	100
8	0460-204-08**	0462-203-08**	8-10 [8.0-5.0]	.430-.492 [10.92-12.50]	35 [156]	125-90 [556-400]	60
12	0460-204-12**	0462-203-12**	12-14 [3.0-2.0]	.222-.284 [5.64-7.21]	30 [134]	75-70 [334-311]	25
16	0460-002-16**	0462-004-16**	16-20 [1.5-0.5]	.250-.312 [6.35-7.92]	25 [111]	35-20 [156-89]	13
16	0460-215-16**	0462-209-16**	14 [2.0]	.250-.312 [6.35-7.92]	25 [111]	70 [311]	13
16	0460-202-16**	0462-201-16**	16-20 [1.5-0.5]	.250-.312 [6.35-7.92]	25 [111]	35-20 [156-89]	13
20	0460-010-20**	0462-005-20**	16-18 [1.0-0.75]	.156-.218 [3.96-5.54]	20 [89]	20 [89]	7.5
20	0460-202-20**	0462-201-20**	20 [0.5]	.156-.218 [3.96-5.54]	20 [89]	20 [89]	7.5

CONTACT RESISTANCE STRENGTH			
WIRE AWG	TEST CURRENT	MILLIVOLT DROP SOLID	MILLIVOLT DROP S & F
4	100	60	N/A
8	60	60	N/A
10	40	60	N/A
10	25	N/A	100
12	25	60	100
14	18	60	100
16	13	60	100
18	10	60	100
20	7.5	60	100

LESS REFERENCE(DROP-THRU) WIRE

MATERIAL SPECIFICATION AND PLATING ** CODES	
PIN:	COPPER ALLOY
SOCKET:	COPPER ALLOY with STAINLESS STEEL SLEEVE
SOLID PLATING OPTIONS: \triangle 7	
31	GOLD*
90	NICKEL SIZE 4 [6 AWG] PIN ONLY
141	NICKEL
S & F PLATING OPTIONS: \triangle 7	
22	NICKEL
44	GOLD*
66	TIN/NICKEL
77	TIN
88	SELECTIVE GOLD*
GOLD*=PLATING IS AVAILABLE (RECOMMENDED) FOR DRY(<5V) CIRCUIT APPLICATIONS	
MATERIALS AND PLATINGS ARE RoHS COMPLIANT	

\triangle 9 DEUTSCH PERFORMANCE SPECIFICATIONS REQUIRE THE USE OF DEUTSCH APPROVED TOOLING.

8. SEE SHEET 2 FOR STAMPED AND FORMED CONTACTS.

\triangle 7 CONTACT FACTORY FOR AVAILABLE PLATING FOR SPECIFIC CONTACTS.

\triangle 6 NOTED MAXIMUM RATED CURRENT DEPENDS ON CONTACT SIZE. ACTUAL RATED CURRENT DEPENDS ON WIRE SIZE.

\triangle 5 WIRE AND INSULATION RANGES ARE FOR REFERENCE ONLY. ACTUAL INSULATION RANGE DEPENDS ON CONNECTOR GROMMET. THE FOLLOWING CRIMP INFORMATION DRAWINGS ARE THE CONTROLLING DOCUMENTS:

"SOLID" CONTACTS: SIZE	"STAMPED" CONTACTS: SIZE
0425-205-0000 4-20	0425-041-0000 12
	0425-208-0000 12
	0425-039-0000 16
	0425-068-0000 16
	0425-203-0000 16
	0425-059-0000 16/20
	0425-207-0000 20

\triangle 4 PULL RATE OF 1.0 INCH [25.4] PER MINUTE MAXIMUM. ACTUAL STRENGTH DEPENDS ON WIRE SIZE.

\triangle 3 THIS CONTACT IS A SLEEVELESS SOCKET DESIGN.

2. DIMENSIONS ARE IN INCHES [mm]. FORCES ARE IN "LBS" (POUNDS) AND "[N]" (NEWTONS).

\triangle 1 CONSULT FACTORY FOR MORE INFORMATION. SEE CRIMP INFORMATION DRAWINGS FOR MORE PART NUMBERS.

NOTES: UNLESS OTHERWISE SPECIFIED

N/A: Not Applicable

14. FOR HIGH TEMPERATURE CONNECTOR CONTACT INFORMATION SEE INFORMATION DRAWING 0425-075-0000.

\triangle 13 THIS CONTACT IS IDENTIFIED BY ONE PURPLE STRIPE.

\triangle 12 THIS CONTACT IS USED FOR HIGH DURABILITY APPLICATIONS. IDENTIFIED BY ONE BLUE STRIPE.

\triangle 11 THIS CONTACT IS AN ULTRASONIC DESIGN.

\triangle 10 0460-204-12** COMES IN NICKEL PLATE ONLY. USE 0460-220-12** FOR GOLD PLATE.

SIGNATURE & DATE	
DR	B. BYFORD 5/26/00
CHK	D. May 1/7/10
PE	D. May 1/7/10
APPD	R. Reed 1-8-10
SCALE	NONE
WT	

PERFORMANCE AND APPLICATION CHARACTERISTICS OF SOLID OR STAMPED AND FORMED CONTACTS AND APPLICABLE WIRE RANGES

INFORMATION

EP	MATL CODE
	3850 INDUSTRIAL AVE. HEMET, CA 92545
DEUTSCH INDUSTRIAL	
B	0425-015-0000
DWG SIZE	CODE 11139 SHEET 1 OF 2