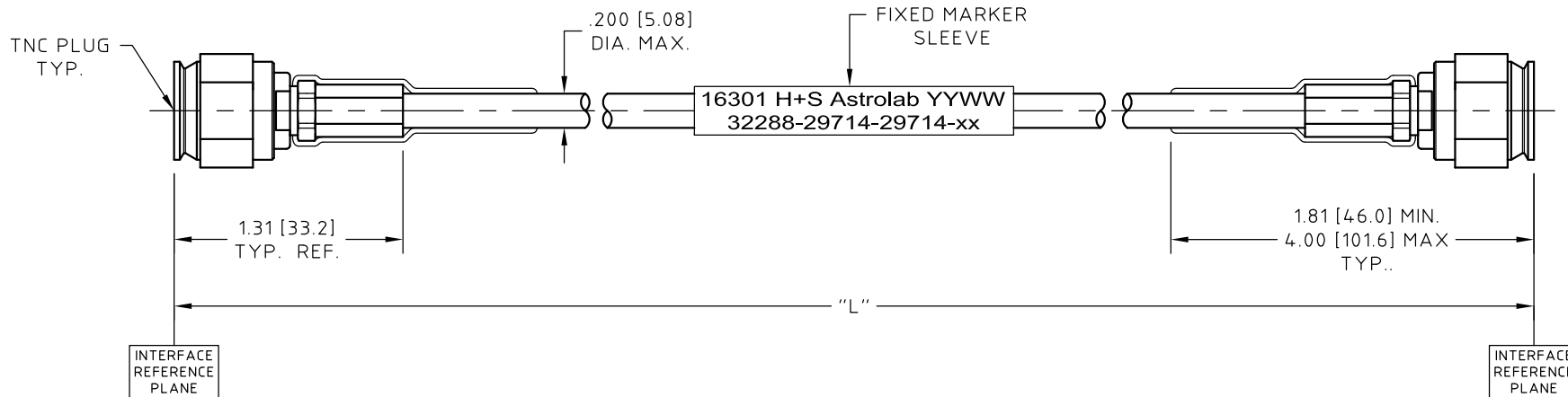


# CONTROL DRAWING

32288-29714-29714-xx

C



**NOTES:**

1. DESCRIPTION,  
CABLE ASSEMBLY, TNC PLUG TO TNC PLUG.
2. CABLE,  
COAXIAL CABLE, HUBER+SUHNER  
Astrolab P/N 32288.  
MEETS OR EXCEEDS MIL-DTL-17.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING FOR  
MATERIALS AND FINISHES.
3. CONNECTOR -A-, TNC PLUG:  
HUBER+SUHNER Astrolab P/N 29714-32288  
IAW MIL-STD-348.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING FOR  
MATERIALS AND FINISHES.
4. CONNECTOR -B-, TNC PLUG:  
SAME AS CONNECTOR -A-.

**NOTES CONTINUED:**

5. MARKING:  
MATERIAL, HEAT SHRINKABLE SLEEVING  
PER SAE-AMS-DTL-23053.  
MARKING, .060 [1.52] MIN. TALL CHARACTERS  
IN CONTRASTING COLOR AND  
IAW MIL-STD-130, DATE CODE  
PER MIL-STD-1285.  
MARKING PERMANENCE IAW SAE-AMS-81531.
6. ELECTRICAL CHARACTERISTICS:  
IMPEDANCE,  
50.0 Ohms NOMINAL.  
FREQUENCY, INSERTION LOSS AND VSWR,  
SEE CHART.
7. MECHANICAL:  
OPERATING TEMPERATURE RANGE,  
-55° C TO +125° C.

HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L" IN [mm]	2.0 GHz		8.0 GHz		12.0 GHz		18.0 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
32288-29714-29714-36	36.00±.18 [914.4±4.6]	1.25:1	0.46	1.29:1	0.91	1.35:1	1.14	1.45:1	1.42
32288-29714-29714-48	48.00±.18 [1219.2±4.6]	1.25:1	0.57	1.29:1	1.13	1.35:1	1.42	1.45:1	1.77
32288-29714-29714-72	72.00±.25 [1828.8±6.4]	1.25:1	0.79	1.29:1	1.58	1.35:1	1.98	1.45:1	2.44

UNLESS OTHERWISE SPECIFIED  
CONCENTRICITY .004 T.I.R.  
CORNERS AND FILLETS .005  
MAX. RADIUS OR CHAMFER.  
SURFACE FINISH 63 RMS  
MICROINCHES OR BETTER.

FRACTIONS	± 1/16
X	± .030
XX	± .015
XXX	± .005
ANGLES	± 1°
DO NOT SCALE DRAWING	

NAME	DATE
PREP. EB	09/10/14
ELEC. RF	09/10/14
MECH. GSG	09/10/14
Q.C.	

**HUBER+SUHNER**  
**Astrolab**

THIS DRAWING CONTAINS PATENTABLE AND PROPRIETARY INFORMATION. THE DESIGN CANNOT BE USED WITHOUT WRITTEN PERMISSION OF HUBER + SUHNER ASTROLAB.

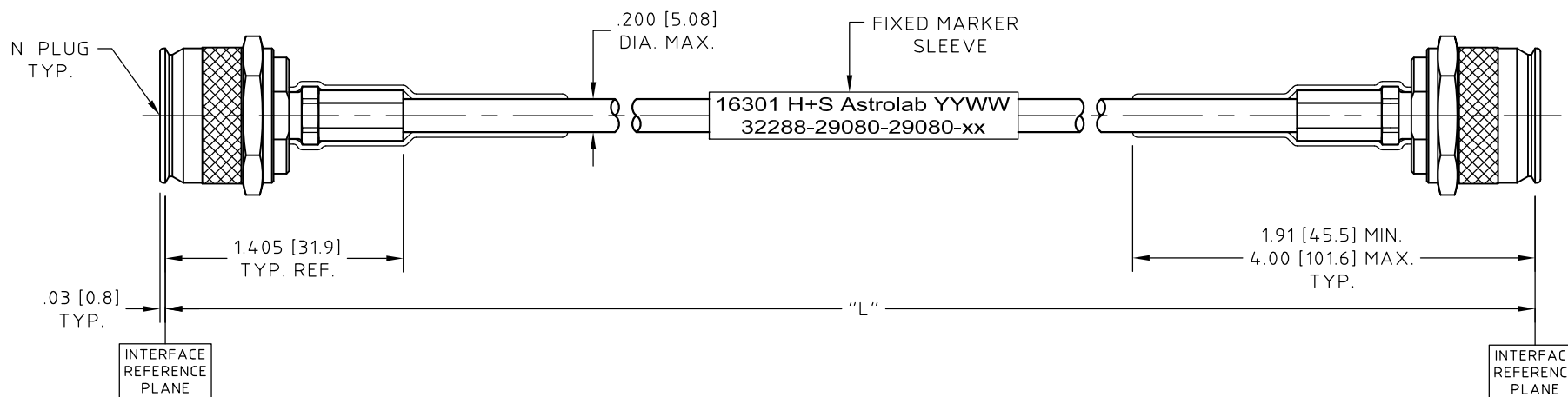
TITLE		<b>CABLE ASSEMBLY</b>		
THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.	SCALE	CODE IDENT.	DWG NO.	REV
	1:1	16301	32288-29714-29714-xx	C

C	ECN No. 16540	09/16/14	EB	
REV.	DESCRIPTION	DATE	BY	APPROVED

# CONTROL DRAWING

32288-29080-29080-xx

C



HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L" IN [mm]	2.0 GHz		12.0 GHz		18.0 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
32288-29080-29080-36	36.00±.18 [914.4±4.6]	1.18:1	0.42	1.32:1	1.12	1.37:1	1.37
32288-29080-29080-48	48.00±.18 [1219.2±4.6]	1.18:1	0.53	1.32:1	1.40	1.37:1	1.72
32288-29080-29080-72	72.00±.25 [1828.8±6.4]	1.18:1	0.76	1.32:1	1.96	1.37:1	2.39

**NOTES:**

1. DESCRIPTION,  
CABLE ASSEMBLY, N PLUG TO N PLUG.
2. CABLE,  
COAXIAL CABLE, HUBER+SUHNER  
Astrolab P/N 32288.  
MEETS OR EXCEEDS MIL-DTL-17.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING FOR  
MATERIALS AND FINISHES.
3. CONNECTOR -A-, N PLUG:  
HUBER+SUHNER Astrolab P/N 29080-32288  
IAW MIL-STD-348.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING FOR  
MATERIALS AND FINISHES.
4. CONNECTOR -B-, N PLUG:  
SAME AS CONNECTOR -A-.

**NOTES CONTINUED:**

5. MARKING:  
MATERIAL, HEAT SHRINKABLE SLEEVING PER  
SAE-AMS-DTL-23053.  
MARKING, .060 [1.52] MIN. TALL CHARACTERS  
IN CONTRASTING COLOR AND  
IAW MIL-STD-130,  
DATE CODE PER MIL-STD-1285.  
MARKING PERMANENCE IAW SAE-AMS-81531.
6. ELECTRICAL CHARACTERISTICS:  
IMPEDANCE,  
50.0 Ohms NOMINAL.  
FREQUENCY, INSERTION LOSS AND VSWR,  
SEE CHART.
7. MECHANICAL:  
OPERATING TEMPERATURE RANGE,  
-55° C TO +125° C.

UNLESS OTHERWISE SPECIFIED  
CONCENTRICITY .004 T.I.R.  
CORNERS AND FILLETS .005  
MAX. RADIUS OR CHAMFER.  
SURFACE FINISH 63 RMS  
MICROINCHES OR BETTER.

FRACTIONS	± 1/16
X	± .030
XX	± .015
XXX	± .005
ANGLES	± 1°
DO NOT SCALE DRAWING	

NAME	DATE
PREP. EB	09/10/14
ELEC. RF	09/10/14
MECH. GSG	09/10/14
Q.C.	

**HUBER+SUHNER**  
**Astrolab**

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INFORMATION. THE DESIGN CANNOT BE USED WITHOUT  
WRITTEN PERMISSION OF HUBER + SUHNER ASTROLAB.

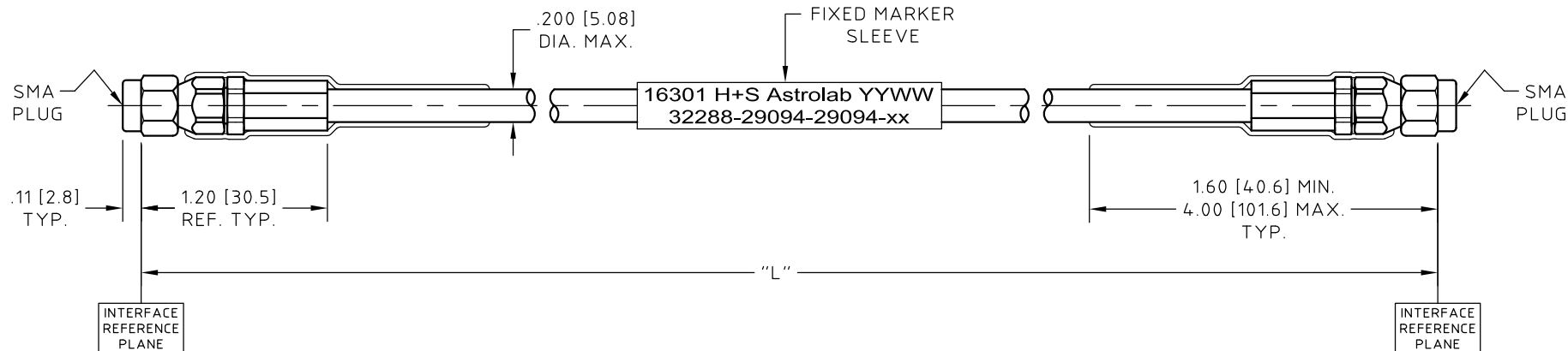
TITLE		<b>CABLE ASSEMBLY</b>	
THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.	SCALE 1:1	CODE IDENT. 16301	DWG NO. 32288-29080-29080-xx

C	ECN No. 16540	09/16/14	EB	APPROVED
REV.	DESCRIPTION	DATE	BY	APPROVED

# CONTROL DRAWING

32288-29094-29094-xx

D



HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L" IN [mm]	2.0 GHz		12.0 GHz		18.0 GHz		26.5 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
32288-29094-29094-36	36.00±.18 [914.4±4.6]	1.18:1	0.42	1.32:1	1.12	1.37:1	1.37	1.45:1	1.71
32288-29094-29094-48	48.00±.18 [1219.2±4.6]	1.18:1	0.53	1.32:1	1.40	1.37:1	1.72	1.45:1	2.14
32288-29094-29094-72	72.00±.25 [1828.8±6.4]	1.18:1	0.76	1.32:1	1.96	1.37:1	2.42	1.45:1	2.96

**NOTES:**

1. DESCRIPTION,  
CABLE ASSEMBLY, SMA  
PLUG TO SMA PLUG.
2. CABLE,  
COAXIAL CABLE, HUBER+SUHNER  
Astrolab P/N 32288.  
MEETS OR EXCEEDS MIL-DTL-17.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
3. CONNECTOR -A-, SMA PLUG:  
HUBER+SUHNER Astrolab  
P/N 29094-32288  
IAW MIL-STD-348.  
SEE HUBER+SUHNER Astrolab  
CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
4. CONNECTOR -B-, SMA PLUG:  
HUBER+SUHNER Astrolab  
P/N 29094-32288  
SAME AS CONNECTOR -A-.

**NOTES CONTINUED:**

5. MARKING:  
MATERIAL, HEAT SHRINKABLE  
SLEEVING PER  
SAE-AMS-DTL-23053.  
MARKING, .060 [1.52] MIN. TALL  
CHARACTERS IN CONTRASTING  
COLOR AND IAW MIL-STD-130,  
DATE CODE PER MIL-STD-1285  
MARKING PERMANENCE IAW  
SAE-AMS-81531.
6. ELECTRICAL CHARACTERISTICS:  
IMPEDANCE,  
50.0 Ohms NOMINAL.  
FREQUENCY, INSERTION LOSS  
AND VSWR, SEE CHART.
7. MECHANICAL:  
OPERATING TEMPERATURE RANGE,  
-55° C TO +125° C.

UNLESS OTHERWISE SPECIFIED  
CONCENTRICITY .004 T.I.R.  
CORNERS AND FILLETS .005  
MAX. RADIUS OR CHAMFER.  
SURFACE FINISH 63 RMS  
MICROINCHES OR BETTER.

FRACTIONS	± 1/16
X	± .030
XX	± .015
XXX	± .005
ANGLES	± 1°
DO NOT SCALE DRAWING	

NAME	DATE
PREP. GSG	04/04/12
ELEC. RF	04/04/12
MECH. AW	04/04/12
Q.C.	

**HUBER+SUHNER**  
**Astrolab**

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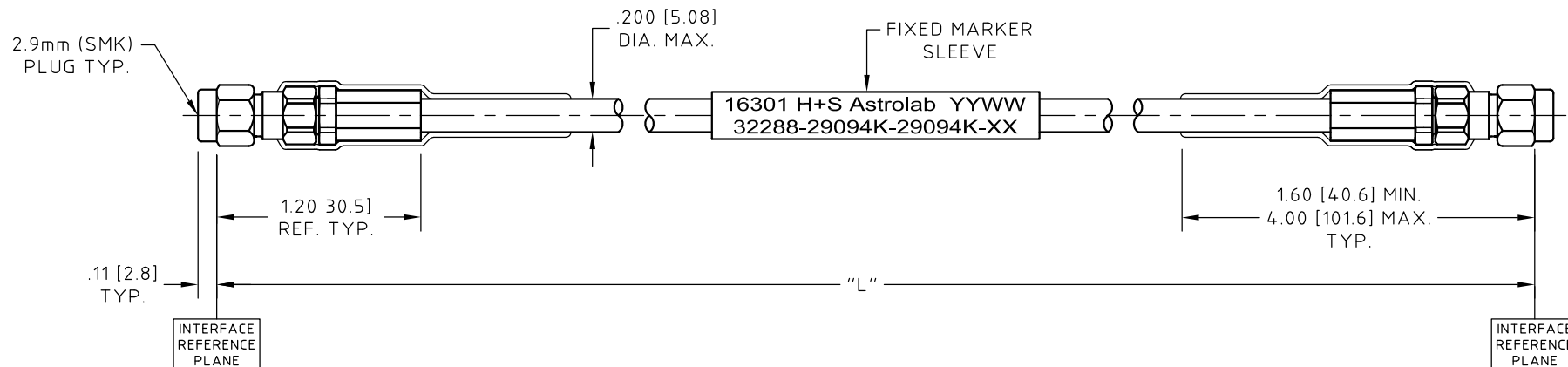
TITLE	<b>CABLE ASSEMBLY</b>			
THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.	SCALE	CODE IDENT.	DWG NO.	REV
	1:1	16301	32288-29094-29094-xx	D

D	ECN No. 16528	09/16/14	EB	
REV.	DESCRIPTION	DATE	BY	APPROVED

# CONTROL DRAWING

**32288-29094K-29094K-XX**

B



**NOTES:**

1. DESCRIPTION,  
CABLE ASSEMBLY, 2.9mm (SMK) PLUG TO 2.9mm (SMK) PLUG.
2. CABLE,  
COAXIAL CABLE HUBER+SUHNER Astrolab P/N 32288  
MEETS OR EXCEEDS MIL-DTL-17.  
SEE HUBER+SUHNER Astrolab CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
3. CONNECTOR -A-, 2.9mm (SMK) PLUG:  
HUBER+SUHNER Astrolab P/N 29094K-32288  
INTERFACE DIMENSIONS IAW MIL-STD-348.  
SEE HUBER+SUHNER Astrolab CONTROL DRAWING  
FOR MATERIALS AND FINISHES.
4. CONNECTOR -B-, 2.9mm (SMK) PLUG:  
SAME AS CONNECTOR -A-.

HUBER+SUHNER Astrolab PART NUMBER	DIMENSION "L" IN [mm]	2.0 GHz		12.0 GHz		18.0 GHz		26.5 GHz		29.0 GHz	
		VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB	VSWR	I.L. dB
32288-29094K-29094K-36	36.00±.18 [914.4±4.6]	1.18:1	0.42	1.32:1	1.12	1.37:1	1.37	1.45:1	1.71	1.50:1	1.84
32288-29094K-29094K-48	48.00±.18 [1219.2±4.6]	1.18:1	0.53	1.32:1	1.40	1.37:1	1.72	1.45:1	2.14	1.50:1	2.30
32288-29094K-29094K-72	72.00±.25 [1828.8±6.4]	1.18:1	0.76	1.32:1	1.96	1.37:1	2.42	1.45:1	2.96	1.50:1	3.20

5. MARKING:  
MATERIAL, HEAT SHRINKABLE SLEEVING PER  
SAE-AMS-DTL-23053.  
MARKING, .060 [1.52] MIN. TALL CHARACTERS IN  
CONTRASTING COLOR AND IAW MIL-STD-130,  
MARKING PERMANENCE IAW SAE-AMS-81531.
6. ELECTRICAL CHARACTERISTICS:  
IMPEDANCE,  
50.0 Ohms NOMINAL.  
FREQUENCY, INSERTION LOSS AND VSWR  
SEE CHART.

7. MECHANICAL:  
OPERATING TEMPERATURE RANGE,  
-55° C TO +125° C.

**ROHS 5/6 COMPLIANT**

NAME	DATE	 <b>HUBER+SUHNER</b> <b>Astrolab</b>
PREP. EB	09/09/14	
ELEC. RF	09/12/14	
MECH. GSG	09/12/14	
Q.C.		THIS DRAWING CONTAINS PATENTABLE AND PROPRIETARY INFORMATION. THE DESIGN CANNOT BE USED WITHOUT WRITTEN PERMISSION OF HUBER + SUHNER ASTROLAB.

UNLESS OTHERWISE SPECIFIED CONCENTRICITY .004 T.I.R. CORNERS AND FILLETS .005 MAX. RADIUS OR CHAMFER. SURFACE FINISH 63 RMS MICROINCHES OR BETTER.	
FRACTIONS	± 1/16
X	± .030
XX	± .015
XXX	± .005
ANGLES	± 1°
DO NOT SCALE DRAWING	

TITLE		<b>CABLE ASSEMBLY</b>			
THDS. TO BE IN ACCORD WITH U.S. DEPT. OF COMM. SCREW THD. STDS. FOR FEDERAL SERVICES 1950 SUPL. TO HANDBOOK H 28.	SCALE 1:1	CODE IDENT. 16301	DWG NO. 32288-29094K-29094K-XX	REV B	

B	ECN No. 16528	09/16/14	EB	
REV.	DESCRIPTION	DATE	BY	APPROVED