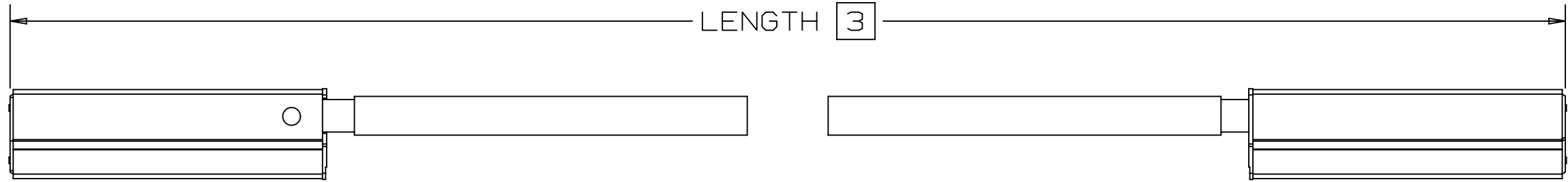


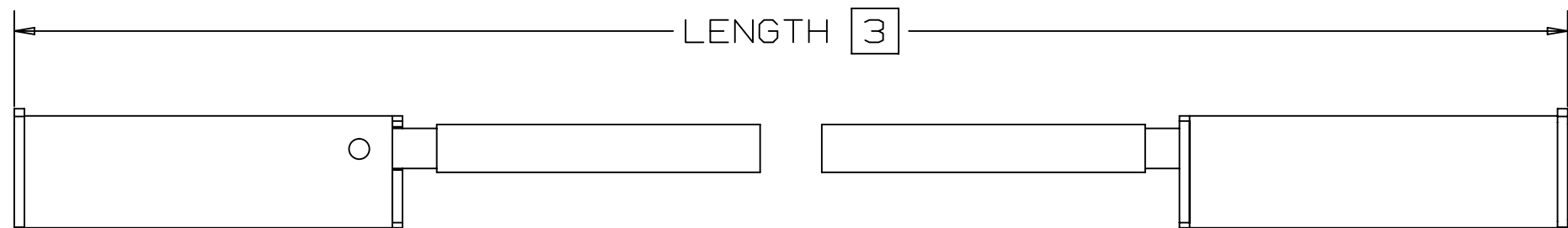
3M™ SHIELDED CONTROLLED IMPEDANCE (SCI) CABLE ASSEMBLIES, .100" PITCH

DUAL ROW .100" SCI CARRIER, .100" PIN STRIP WITH LATCH, COAX CABLE

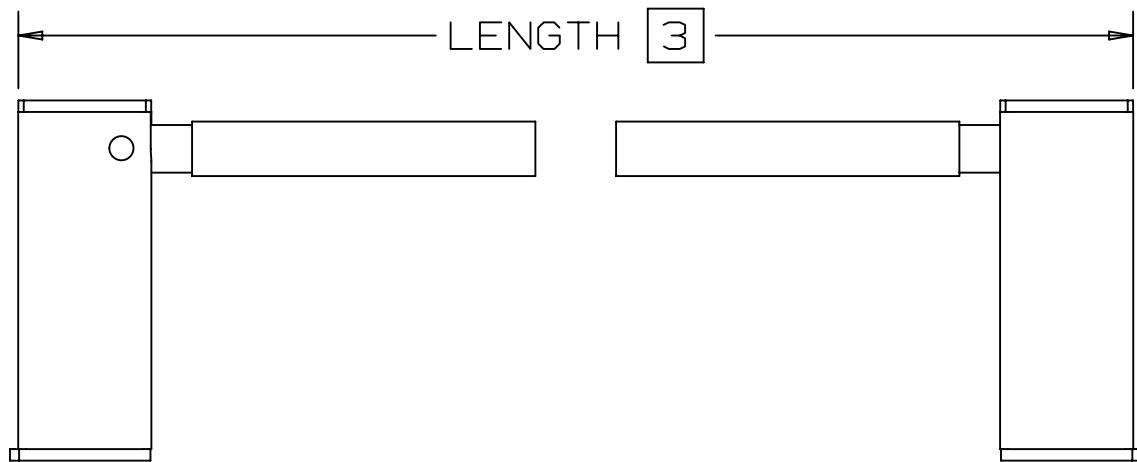
CARRIER VERSION, CONNECTOR TYPE #24



STAND ALONE VERSION, CONNECTOR TYPE #23



RIGHT ANGLE VERSION, CONNECTOR TYPE #22



NOTE:
1. ANY VERSION CONNECTOR TYPE
CAN BE ON THE SAME CABLE ASSEMBLY.

- * .100 INCH (2.54MM) CENTER SPACING.
- * MATES WITH STANDARD 3M™ TWO-PIN HEADERS.
- * SUPPLIED AS A COMPLETE ASSEMBLY.

STAND-ALONE VERSION:
* AVAILABLE IN RIGHT ANGLE AND STRAIGHT CONFIGURATIONS WITH OPTIONAL POLARIZATION FEATURE.
* RIGHT ANGLE CONNECTOR HAS OPTIONAL TWO-PIN HEADER LATCH.

CARRIER VERSION:
* AVAILABLE ONLY IN STRAIGHT CONFIGURATION DESIGNED FOR USE WITH THE 3M™ SCI CARRIER SYSTEM.

2 PHYSICAL :

(CONNECTOR INSULATION) MATERIAL: THERMOPLASTIC
FLAMMABILITY: UL94V-0
(CONNECTOR CONTACT) MATERIAL: COPPER ALLOY
PLATING: 50/50μ" Au/Ni (1.27/1.27μm Au/Ni)
(CONNECTOR SHIELDBOX) MATERIAL: COPPER ALLOY
PLATING: SOLDERABLE NICKEL.

2 ELECTRICAL :

CURRENT RATING: 1A
INSULATION RESISTANCE: >5 X 10⁹Ω
WITHSTANDING VOLTAGE: 500 V_{AC}
CHARACTERISTIC IMPEDANCE: SEE CABLE TYPES.

2 MECHANICAL :

CENTER SPACING: .100" (2.54mm)
MATING PIN DEMINSIONS: .024" MIN./ .026" MAX. (0.61mm/0.665mm)
MATING PIN LENGTH 22, 23: .23" NOM. (5.08mm);
24: .21" NOM. (5.02mm).
CONTACT MATING POINT 22, 23: .13" (3.40mm);
24: .10" (2.60mm).
CONNECTOR INSERTION FORCE: 2.3N MAX. (PIN: .025" (0.63mm).
CONNECTOR WITHDRAWAL FORCE: 1.3N TYPICAL (PIN: .025" (0.63mm).
CABLE RETENTION FORCE: 50N MIN.
DURABILITY (INSERTION/WITHDRAWAL): 500 CYCLES.

2 ENVIRONMENTAL :

TEMPERATURE RATING: 22, 23: -55°C TO+105°C;
24: -55°C TO+125°C

ORDERING INFORMATION

CABLE ASSEMBLY-INDIVIDUAL LINES

98XXXX-XXX-XXX.X-X X Y

LEFT CONNECTOR TYPE/RIGHT CONNECTOR TYPE:

22 = RIGHT ANGLE, NONPOLARIZED
23 = STRAIGHT, NONPOLARIZED
24 = CARRIER VERSION, STRAIGHT

CABLE TYPE:

017 = 50Ω
027 = 50Ω LOW CAPACITANCE
041 = 75Ω
XXX = FOR OTHER CABLE OPTIONS
CONTACT 3M (IF NON STANDARD)

LENGTH (IN INCHES):

USA AND CANADIAN
CERTIFICATION:
Y = YES

GROUND PATTERN:
S = SIGNAL AS INDICATED ON CONNECTOR DWG
Z = CUSTOMER SPECIAL GROUND PATTERN
(CONSULT 3M)

HARNESSING
A = MULTIPLE ASS'S HARNESSSED
0 = SINGLE ASS'Y ONLY

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UL FILE NO: E86982 (OPTIONAL)

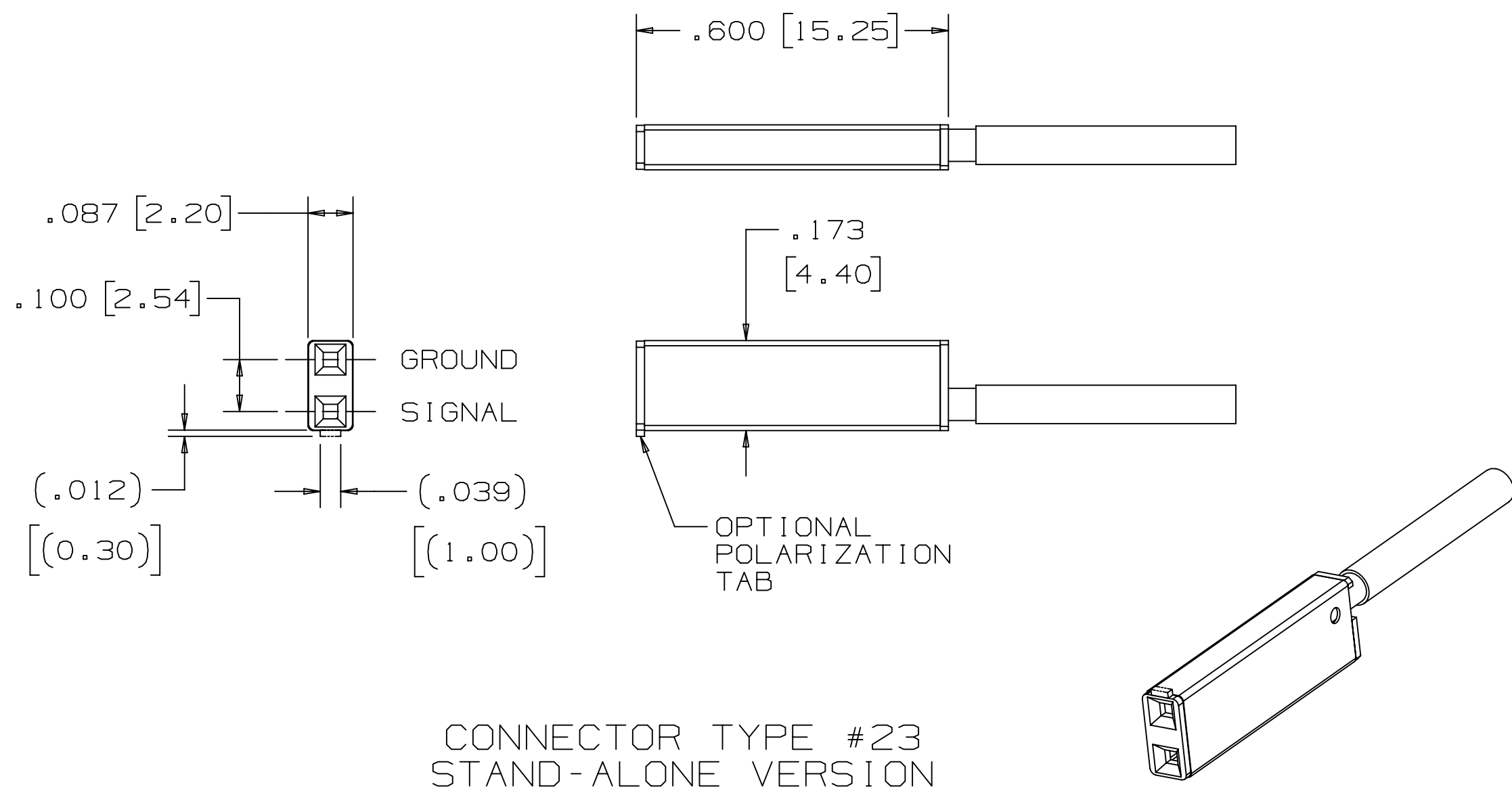
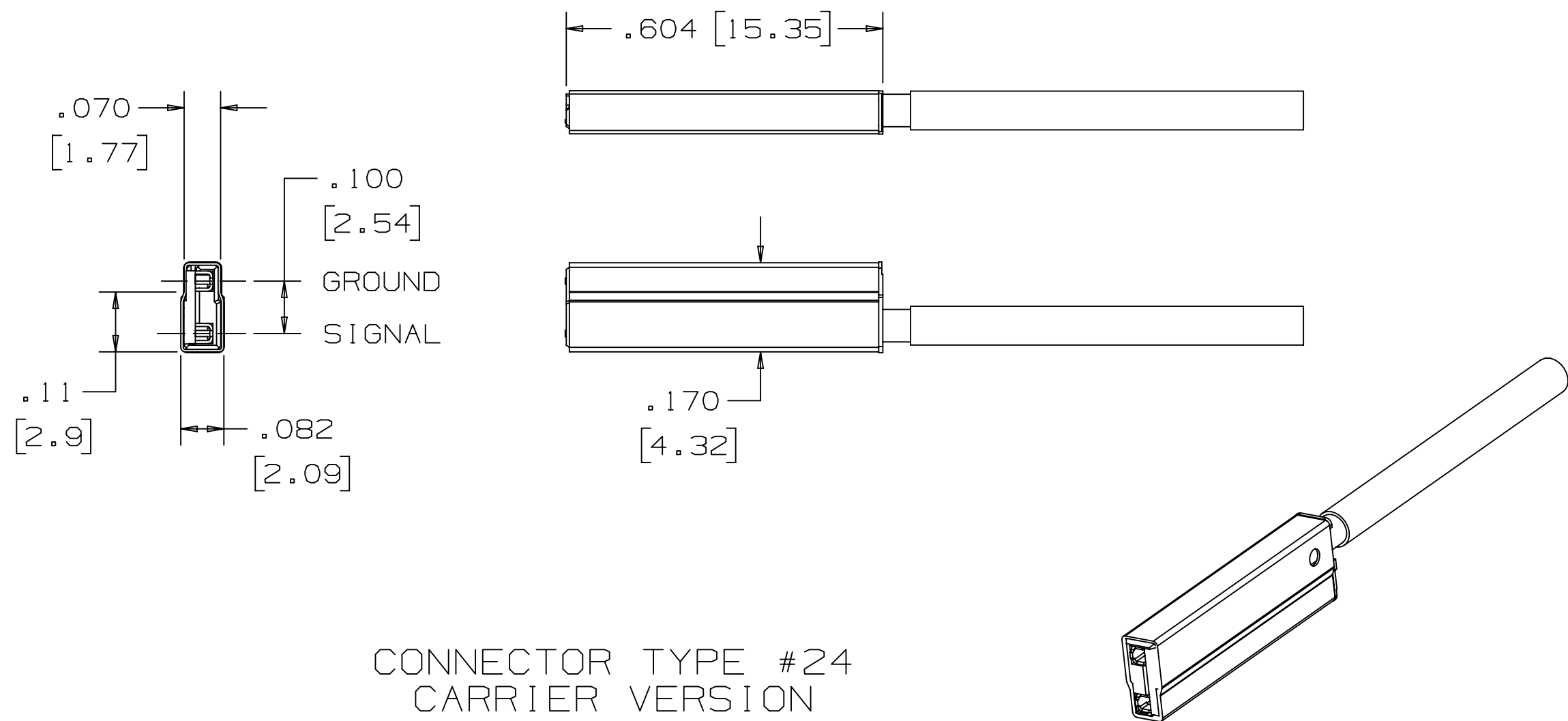
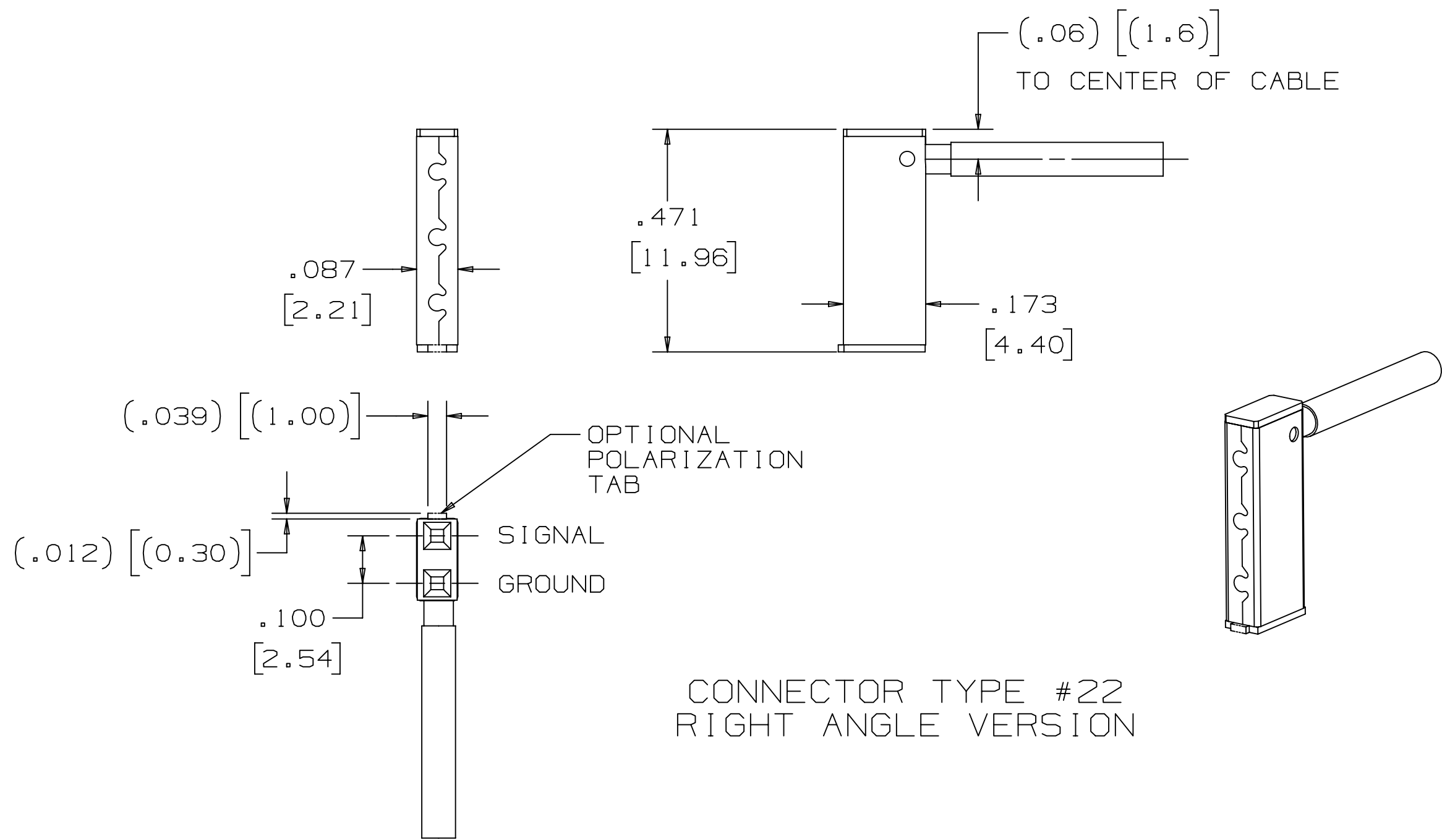
NOTES			
1.	REGULATORY INFORMATION: VISIT 3M.com/regs		
2.	IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.		
3.	ASSEMBLY TOLERANCES: <10" : ±.25" 10" TO 36" : ±.50" 36" TO 120" : ±1" >120" : ±2" MINIMUM LENGTH: 4.3"		

DIMENSIONS: INCHES [MM]
[MM] IS FOR REF. ONLY

DESIGN REFERENCE		NEXT ASSEMBLY	
AKSPP	CODES		
DIVISION		DIVISION CODE	
DO NOT SCALE DRAWING		TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018	
MAX. SURFACE ROUGHNESS		MILLIMETERS	
TOTAL SURFACES		ANGLES	
MARKED ONLY			

C	114445	FEB 12,2024	JNC	FJR
B	108799	JAN 31,2023	JNC	FJR
A	AT1780	SEP 23,2005	---	---
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	CASTIGLIONE	DATE JAN 31,2023	DATE	
CHKD	S. OWEN	DATE JAN 31,2023	DATE FEB 01,2023	
3M Center St. Paul, MN 55144				
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SHIELDED CONTROLLED IMPEDANCE (SCI) .100" PITCH CABLE ASSEMBLY				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D	78-5100-0803-6	C		
MODEL	.100 SCI	DET	LISTS	YES
		NO	SHT	1 OF 4

3M™ SHIELDED CONTROLLED IMPEDANCE (SCI) CABLE ASSEMBLIES, .100" PITCH
DUAL ROW .100" SCI CARRIER, .100" PIN STRIP WITH LATCH, COAX CABLE



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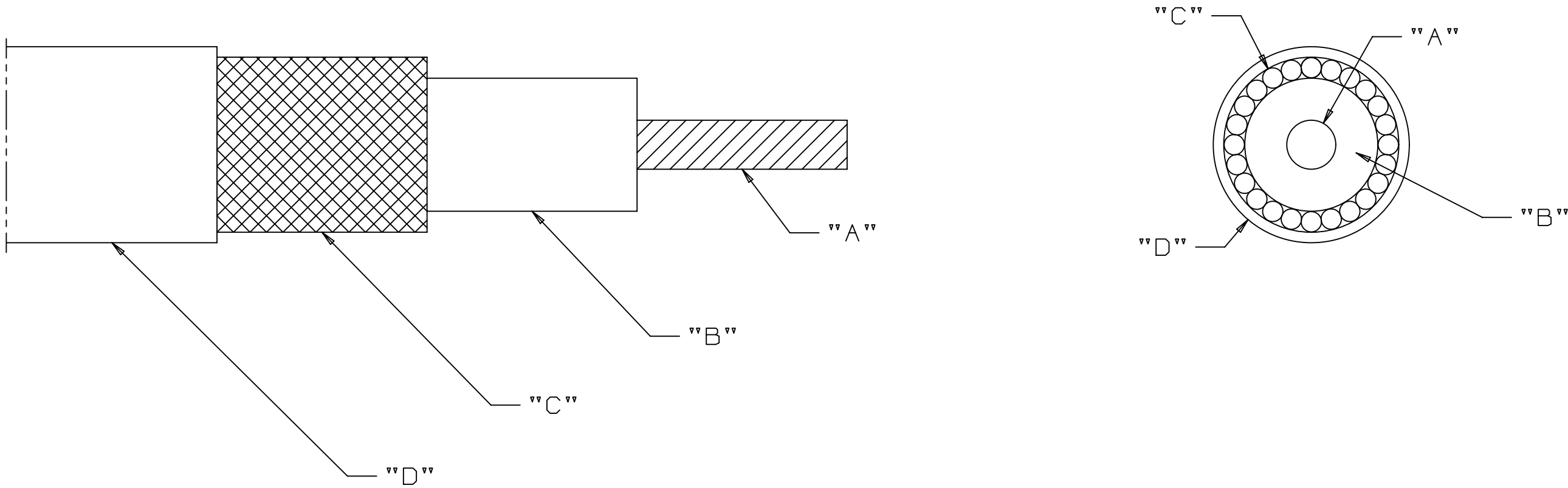
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INFORMATION CALL 800-225-5373

				C	I144445	FEB 12, 2024				JNC	FJR				
				B	108799	REVISED ORDERING INFO				JNC	FJR				
				A	AT1780	JAN 31, 2023 REVISE WITHDRAWAL FORCE AND REDRAWN				---	---				
				PRODUCTION RELEASE											
DESIGN REFERENCE				NEXT ASSEMBLY				REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD		
XREFS				CODES				CHKD	CAS	GLIONE	DATE	JAN 31, 2023	MFG	DATE	
DIVISION				DIVISION CODE				CHKD	S.	OWEN	DATE	JAN 31, 2023	APPR	DATE	
DO NOT SCALE DRAWING				SCALE 4 1				TOLERANCES EXCEPT AS NOTED				3M St. Paul, MN 55144			
THIRD ANGLE PROJECTION				INCHES 0.00 ± .01 0.000 ± .005 0.000 ± .0005				SHIELDED CONTROLLED IMPEDANCE (SCI) .100" PITCH CABLE ASSEMBLY				© 3M COPYRIGHT 2024 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.			
INTERPRET PER ASME Y14.5 - 2018				MILLIMETERS 0.0 0.00 ± .01 0.000 ± .005 0.000 ± .0005				CAGE NUMBER				DRAWING NO.			
MAX. SURFACE ROUGHNESS				0.0 0.00 ± .01 0.000 ± .005 0.000 ± .0005				SIZE				D 78-5100-0803-6			
MARKED ONLY				ANGLES				MODEL				.100 SCI			
								DET.				LISTS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
												SHT 2 OF 4			

3M™ SHIELDED CONTROLLED IMPEDANCE (SCI) CABLE ASSEMBLIES, .100" PITCH

DUAL ROW .100" SCI CARRIER, .100" PIN STRIP WITH LATCH, COAX CABLE

CABLE SPECIFICATION



PHYSICAL PROPERTIES (TYP)					
CABLE TYPE		"A" CENTER CONDUCTOR	"B" DIELECTRIC MATERIAL	"C" SHIELD	"D" JACKET
017	50Ω ±5Ω	30 AWG SCCC'S STRANDED (7/38) .012" O.D. [0.30mm O.D.]	PTFE .033" O.D. [0.84mm O.D.]	38 AWG BRAID (SPC) 95% NOMINAL COVERAGE .059" O.D. [1.50mm O.D.]	FEP NATURAL COLOR .071" O.D. [1.80mm O.D.]
027	50Ω ±2Ω	26 AWG SPC STRANDED (7/34) .019" O.D. [0.48mm O.D.]	AIR/FEP TUBE .044" O.D. [1.1mm O.D.]	38 AWG (SPC) DOUBLE SERVE	FEP BLUE COLOR .074" O.D. [1.88mm O.D.]
041	75Ω ±3Ω	30 AWG SPC STRANDED (7/38) .012" O.D. [0.30mm O.D.]	FEP (POROUS) .045" O.D. [1.14mm O.D.]	40 AWG BRAID (TPC) 90% MINIMUM COVERAGE .059" O.D. [1.50mm O.D.]	FEP GRAY COLOR .074" O.D. [1.88mm O.D.]
SCCCS = SILVER COPPER COVERED STEEL SPC = SILVER PLATED COPPER TPC = TIN PLATED COPPER					

ELECTRICAL PROPERTIES (TYP)					
CABLE TYPE		CAPACITANCE	PROPAGATION DELAY	ATTENUATION	CONDUCTOR RESISTANCE
017	50Ω ±5Ω	32 pF/ft MAX. [105 pF/m]	1.46 nS/ft NOM. [4.8 nS/m]	33 dB MAX/100 ft @ 400 MHz [108 dB/100m]	.24Ω/ft @ 68°F [0.8Ω/m @ 20°C]
027	50Ω ±2Ω	23 pF/ft NOM. [75 pF/m]	1.15 nS/ft NOM. [3.77 nS/m]	20 dB/100 ft @ 400 MHz NOM. [65 dB/100m]	.041Ω/ft @ 68°F [0.15Ω/m @ 20°C]
041	75Ω ±3Ω	16 pF/ft MAX. [52 pF/m]	1.22 nS/ft NOM. [4.0 nS/m]	10 dB MAX/100 ft @ 100 MHz [33 dB/100m]	.09Ω/ft @ 68°F [0.3Ω/m @ 20°C]

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C	114445	FEB 12,2024	JNC	FJR
B	108799	JAN 31,2023	JNC	FJR
A	AT1780	SEP 23,2005	---	---

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
XXXXXX		DRFT	CASTIGLIONE	DATE JAN 31,2023	APPR	DATE
		CHKD	S. OWEN	DATE JAN 31,2023	APPR	DATE FEB 01,2023
DIVISION	DIVISION CODE	© 3M COPYRIGHT 2024				
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DO NOT SCALE DRAWING	SCALE 30 1	TOLERANCES EXCEPT AS NOTED	3M Center St. Paul, MN 55144			
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	INCHES .0 ±.1 .00 ±.01 .000 ±.005 .0000 ±.0005	TITLE SHIELDED CONTROLLED IMPEDANCE (SCI) .100" CABLE ASSEMBLY			
MAX. SURFACE ROUGHNESS	ALL SURFACES	MILLIMETERS 0 ±.0 .00 ±.000	CAGE NUMBER	SIZE	DRAWING NO.	REV.
MARKED ONLY		ANGLES ±	D78-5100-0803-6			C
			MODEL .100 SCI	DET	LISTS	YES NO SHT 3 OF 4

3M™ SHIELDED CONTROLLED IMPEDANCE (SCI) CABLE ASSEMBLIES, .100" PITCH
DUAL ROW .100" SCI CARRIER, .100" PIN STRIP WITH LATCH, COAX CABLE

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Electronics Materials Solutions Division
13011 McCallen Pass, Bldg. C
Austin, TX 78753-5380
1-800-225-5373
www.3m.com/interconnect

		C	114445	FEB 12,2024	JNC	FJR
		B	108799	REVISED ORDERING INFO	JNC	FJR
		A	AT1780	JAN 31,2023 REVISE WITHDRAWAL FORCE AND REDRAWN SEP 23,2005 PRODUCTION RELEASE	---	---
DESIGN REFERENCE		REV	ECO	ISSUE DATE AND DESCRIPTION		
NEXT ASSEMBLY		DRFT	CHKD			
APP'D	DATE	APP'D	DATE			
CODES		CASTIGLIONE	JAN 31,2023			
CHKD	DATE	APP'D	DATE			
S. OWEN	JAN 31,2023	F. RODRIGUEZ	FEB 01,2023			
DIVISION		DIVISION CODE				
		EMSD				
DO NOT SCALE DRAWING	SCALE 4 1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION		INCHES .0 ± .1 .00 ± .01 .000 ± .005 .0000 ± .0005 MILLIMETERS 0 ± .00 ± .000 ±				
INTERPRET PER ASME Y14.5 - 2018		MAX SURFACE ROUGHNESS ALL SURFACES MARKED ONLY				
		MODEL .100 SCI DET. LISTS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO SHT 4 OF 4				

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3M Center
St. Paul,
MN 55144

TITLE
SHIELDED CONTROLLED
IMPEDANCE (SCI) .100"V
CABLE ASSEMBLY

CAGE NUMBER
D 78-5100-0803-6
REV.
C