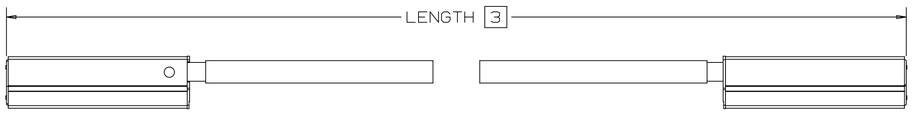
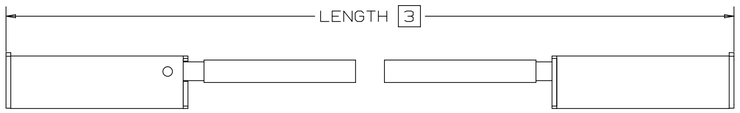
3M™ SHIELDED CONTROLLED IMPEDANCE (SCI) CABLE ASSEMBLIES, .100" SERIES

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

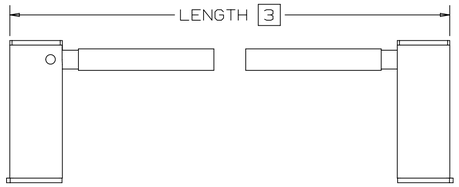
CARRIER VERSION, CONNECTOR TYPE #24



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.

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"

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 $10^9\Omega$
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 X

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):

HARNESSING
- A = MULTIPLE ASS'S HARNESSED
- O = SINGLE ASS'Y ONLY

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

USA AND CANADIAN CERTIFICATION:
- Y = YES
- N = NO

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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
B	108799	JAN 31,2023 REVISE WITHDRAWAL FORCE AND REDRAWN	JNC	FJR
A	ATI780	SEP 23,2005 PRODUCTION RELEASE	---	---

DESIGN REFERENCE | NEXT ASSEMBLY | ACCESS CODES

DRFT	CASTIGLIONE	DATE	JAN 31,2023
CHKD	S. OWEN	APPVL F. RODRIGUEZ	DATE FEB 01,2023

DIVISION | DIVISION CODE EMSD

DO NOT SCALE DRAWING | SCALE 4/1

TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±.1
.00 ±.01
.000 ±.005
.0000 ±.0005
MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±
ANGLES ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS ☐ ALL SURFACES ☐ MARKED ONLY

3M Center St. Paul, MN 55144

© 3M COPYRIGHT 2023
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.

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

CAGE NUMBER	SIZE	DRAWING NO.	REV.
	D	78-5100-0803-6	B

MODEL .100 SCI | DET. LISTS ☐ YES ☒ NO | SHT 1 OF 4

78-5100-0803-6 DRAWING NUMBER | B REVISION

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
http://www.3M.com/interconnect

3M IS A TRADEMARK OF 3M COMPANY.

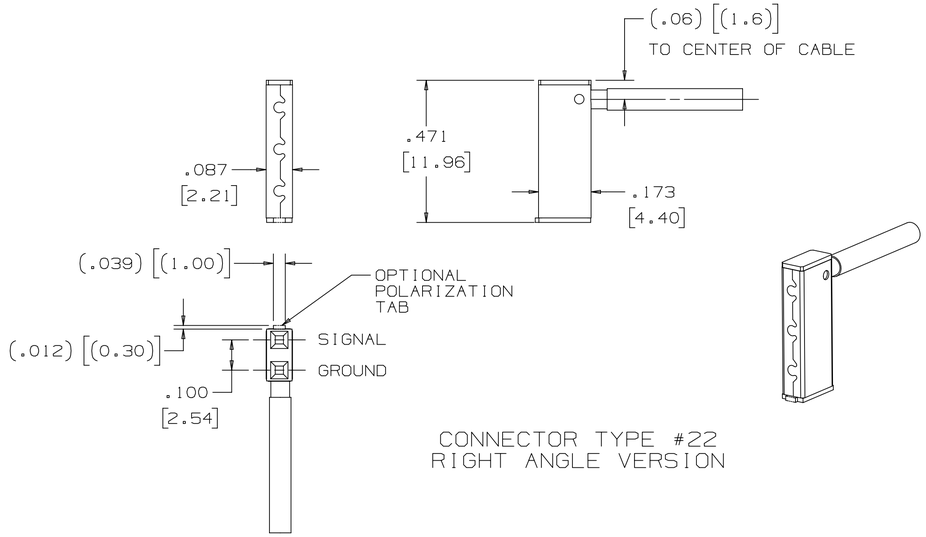
FOR TECHNICAL, SALES OR ORDERING INFORMATION CALL 800-225-5373

c UL us

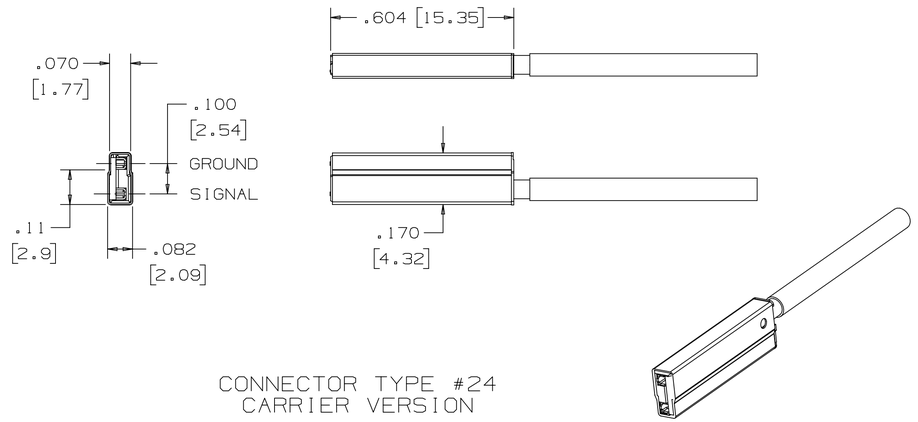
UL FILE NO: E86982 (OPTIONAL)

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

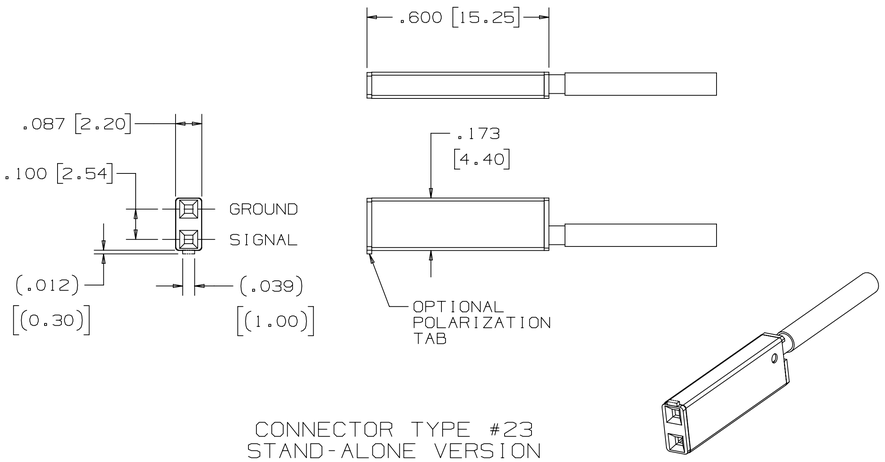
DUAL ROW .100" SCI CARRIER, .100" PIN STRIP WITH LATCH, COAX CABLE



CONNECTOR TYPE #22
RIGHT ANGLE VERSION



CONNECTOR TYPE #24
CARRIER VERSION



CONNECTOR TYPE #23
STAND-ALONE VERSION

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
http://www.3M.com/interconnect

3M IS A TRADEMARK OF 3M COMPANY.
FOR TECHNICAL, SALES OR ORDERING
INFORMATION CALL 800-225-5373

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
B	108799	JAN 31,2023 REVISE WITHDRAWAL FORCE AND REDRAWN	JNC	FJR
A	AT1780	SEP 23,2005 PRODUCTION RELEASE	---	---

DESIGN REFERENCE | NEXT ASSEMBLY
ACCESS CODES
DRFT CASTIGLIONE — DATE JAN 31,2023 — MFG — DATE
CHKD S. OWEN — DATE JAN 31,2023 — APPV. F. RODRIGUEZ — DATE FEB 01,2023
DIVISION
DIVISION CODE EMSD
DO NOT SCALE DRAWING
SCALE 4 1
TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±.1
.00 ±.01
.000 ±.005
.0000 ±.0005
MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±
ANGLES ±
THIRD ANGLE PROJECTION
INTERPRET PER ASME Y14.5 - 2018
MAX SURFACE ROUGHNESS
☐ ALL SURFACES
☐ MARKED ONLY

3M Center, St. Paul, MN 55144

© 3M COPYRIGHT 2023
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.

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

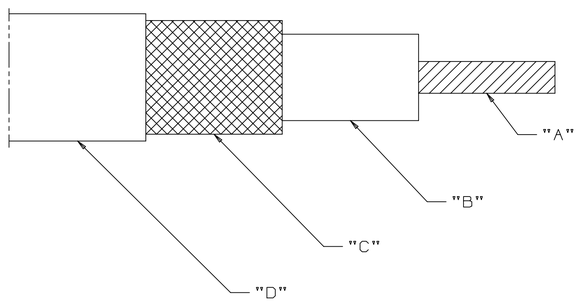
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-0803-6 | REV. B
MODEL .100 SCI | DET LIST: ☐ YES ☒ NO | SHT 2 OF 4

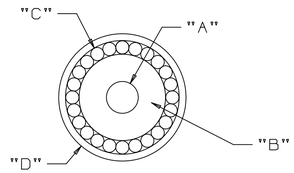
78-5100-0803-6 DRAWING NUMBER
B REVISION

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

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 SCCCS 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]

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
http://www.3M.com/interconnect

3M IS A TRADEMARK OF 3M COMPANY.
FOR TECHNICAL, SALES OR ORDERING INFORMATION CALL 800-225-5373

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
B	108799	JAN 31,2023 REVISE WITHDRAWAL FORCE AND REDRAWN	JNC	FJR
A	ATI780	SEP 23,2005 PRODUCTION RELEASE	---	---

DESIGN REFERENCE: NEXT ASSEMBLY
ACCESS CODES:
DRFT: CASTIGLIONE — DATE: JAN 31,2023
CHKD: S. OWEN — DATE: JAN 31,2023
MFG — DATE
APPVL: F. RODRIGUEZ — DATE: FEB 01,2023
DIVISION: DIVISION CODE: EMSD
DO NOT SCALE DRAWING — SCALE 30/1
THIRD ANGLE PROJECTION
INTERPRET PER ASME Y14.5 - 2018
MAX SURFACE ROUGHNESS: ☐ ALL SURFACES ☐ MARKED ONLY
TOLERANCES EXCEPT AS NOTED
INCHES: .0 ±.1; .00 ±.01; .000 ±.005; .0000 ±.0005
MILLIMETERS: 0 ±; .0 ±; .00 ±; .000 ±
ANGLES ±

3M Center St. Paul, MN 55144

© 3M COPYRIGHT 2023
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.

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

CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-0803-6 | REV. B
MODEL: .100 SCI
DET. LISTS ☐ YES ☒ NO
SHT 3 OF 4

78-5100-0803-6 B
DRAWING NUMBER REVISION

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

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

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement or repair of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by applicable law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: For industrial use only. Not intended, labeled or packaged for consumer sale or use.

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

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
http://www.3M.com/interconnect

3M IS A TRADEMARK OF 3M COMPANY.
FOR TECHNICAL, SALES OR ORDERING INFORMATION CALL 800-225-5373

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
B	108799	JAN 31,2023 REVISE WITHDRAWAL FORCE AND REDRAWN	JNC	FJR
A	AT1780	SEP 23,2005 PRODUCTION RELEASE	---	---

DESIGN REFERENCE | NEXT ASSEMBLY

DRFT: CASTIGLIONE — DATE: JAN 31,2023 — MFG — DATE
CHKD: S. OWEN — DATE: JAN 31,2023 — APPVL: F. RODRIGUEZ — DATE: FEB 01,2023

ACCESS CODES

DIVISION: EMSD — DIVISION CODE

DO NOT SCALE DRAWING — SCALE 4/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS ☐ ALL SURFACES ☐ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES
.0 ±.1
.00 ±.01
.000 ±.005
.0000 ±.0005

MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±

ANGLES ±

3M Center, St. Paul, MN 55144
© 3M COPYRIGHT 2023
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.

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

CAGE NUMBER | SIZE: D | DRAWING NO.: 78-5100-0803-6 | REV.: B

MODEL: .100 SCI | DET LISTS ☐ YES ☒ NO | SHT 4 OF 4

B REVISION

78-5100-0803-6 DRAWING NUMBER