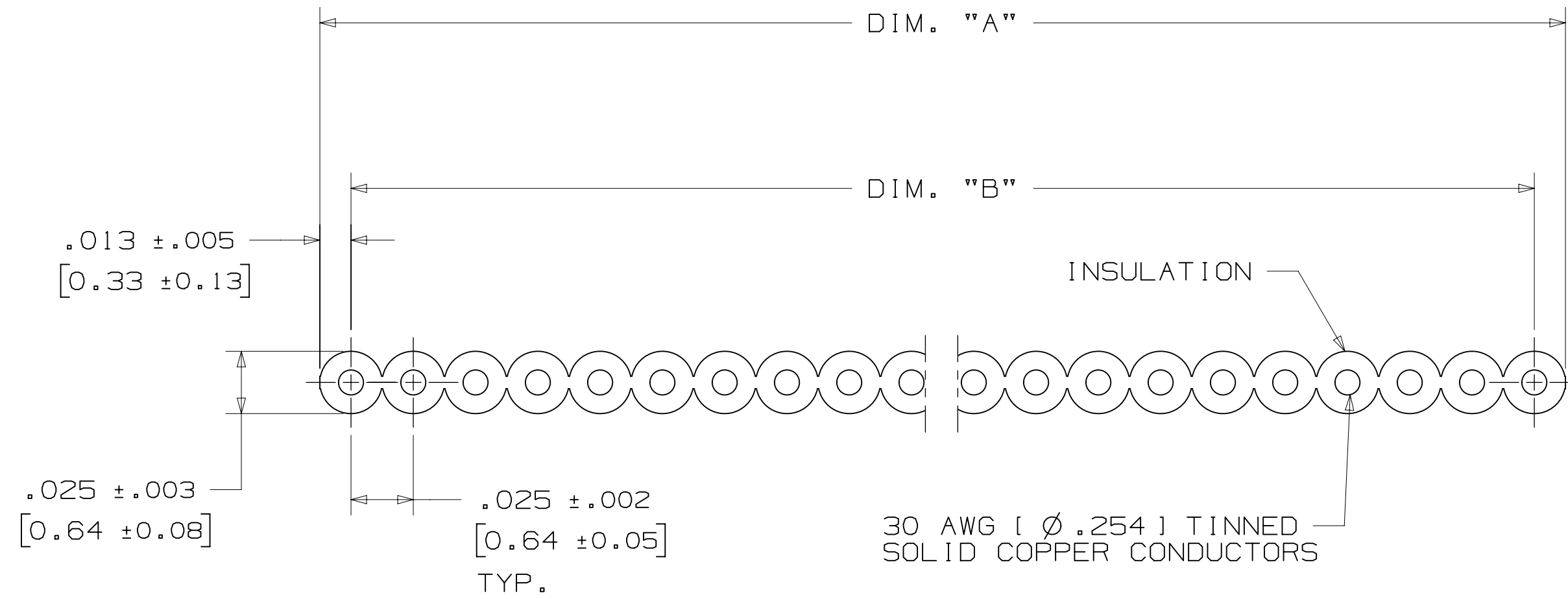


3M™ ROUND CONDUCTOR FLAT LSHF CABLE, HF447 SERIES

.025" 30 AWG SOLID



NUMBER OF CONDUCTORS	3M PART NUMBER	DIM. "A"	DIM. "B"
10	HF447/10	.250±.006 [6.35]	.225±.004 [5.72]
12	HF447/12	.300±.006 [7.62]	.275±.004 [6.99]
14	HF447/14	.350±.006 [8.89]	.325±.004 [8.26]
16	HF447/16	.400±.006 [10.16]	.375±.004 [9.53]
20	HF447/20	.500±.006 [12.70]	.475±.004 [12.07]
26	HF447/26	.650±.006 [16.51]	.625±.004 [15.88]
30	HF447/30	.750±.006 [19.05]	.725±.004 [18.42]
34	HF447/34	.850±.009 [21.59]	.825±.006 [20.96]
36	HF447/36	.900±.009 [22.86]	.875±.006 [22.23]
40	HF447/40	1.000±.009 [25.40]	.975±.006 [24.77]
50	HF447/50	1.250±.009 [31.75]	1.225±.006 [31.12]
60	HF447/60	1.500±.012 [38.10]	1.475±.009 [37.47]
68	HF447/68	1.700±.012 [43.18]	1.675±.009 [42.55]
80	HF447/80	2.000±.015 [50.80]	1.975±.011 [50.17]
100	HF447/100	2.500±.015 [63.50]	2.475±.012 [62.87]

ASSESSMENT HALOGENS (CHLORINE, BROMINE & FLUORINE)	IEC62821-1, 62821-2 AND 60684-2
DETERMINATION OF THE HALOGEN ACID GAS CONTENT	IEC 60754-1:2011, BS EN60754-1:2014
DETERMINATION OF ACIDITY (BY pH MEASUREMENT) AND CONDUCTIVITY	IEC 60754-2

UL LOW SMOKE HALOGEN FREE (LSHF) WIRE AND CABLE MARK COVERED UNDER IEC 62821-1,2,3 SERIES-UL 2885 HARMONIZED TO EU, INTERNATIONAL STANDARDS.

- NOTES
- REGULATORY INFORMATION: VISIT 3M.com/regs OR CONTACT YOUR 3M REPRESENTATIVE TO FIND THE RoHS COMPLIANCE STATUS OF THE 3M PART YOU ARE INTERESTED IN.
UL FILE: E42769
STYLE: 22088
 - IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
 - UL HAS TESTED THE INSULATION MATERIAL UNDER UL2885 AND DETERMINED THEM TO BE HALOGEN FREE. THE UL REFERENCE FILE NUMBER IS E118773. PLEASE SEE TABLE 2 FOR THE EQUIVALENT IEC TEST STANDARDS.
 - UL HAS TESTED THE COMPLETE CABLE UNDER IEC 61034-2 FOR LOW SMOKE CHARACTERISTICS. THE UL REFERENCE FILE NUMBER IS E42769. THE SMOKE TEST OF IEC 61034-2.

ORDERING INFORMATION

HF447/XX-XX

NUMBER OF CONDUCTORS (SEE TABLE 1)

BLANK = STANDARD
SF = SPLICE FREE

NOTE: AVAILABLE IN STANDARD LENGTHS OF 100 ft AND 300 ft PER ROLL, PLEASE SPECIFY WHEN ORDERING. CONTACT 3M FOR AVAILABILITY OF ADDITIONAL CONDUCTOR COUNTS AND/OR CUSTOM ROLL LENGTHS.

2 PHYSICAL :

INSULATION: LSHF EVA/PO
MATERIAL: LSHF EVA/PO
COLOR: DARK GRAY
MARKING: NONE
STANDARD: SEE "PRINTING ILLUSTRATION" VIEW
CANADIAN: SEE "PRINTING ILLUSTRATION" VIEW
PRIMARY CABLE: BLUE MARKING ON ONE EDGE OF CABLE DESIGNATES WIRE NUMBER 1.

CONDUCTORS: 30 AWG (∅ .254) TINNED SOLID COPPER

2 ELECTRICAL :

VOLTAGE RATING: USA 150V CANADIAN 150V EU: <50V
INSULATION RESISTANCE: (PRIMARY CABLE) >1 x 10⁹Ω/10ft. [3m]

CHARACTERISTIC IMPEDANCE:	UNBALANCED 80Ω	BALANCED 134Ω
CAPACITANCE:	19.68 pF/ft [64.6 pF/m]	11.2 pF/ft [36.5 pF/m]
INDUCTANCE:	.13μH/ft [.43μH/m]	.2μH/ft [.66μH/m]
PROPAGATION DELAY:	1.57 ns/ft [5.15 ns/m]	1.49 ns/ft [4.89 ns/m]
VELOCITY OF PROPAGATION:	65%	65%

NOTE: UNBALANCED IS MEASURED BETWEEN GROUND-SIGNAL-GROUND CONDUCTORS. BALANCED IS MEASURED BETWEEN CONDUCTORS WITHIN A PAIR.

2 ENVIRONMENTAL :

TEMPERATURE RATING: -40°C TO 90°C
FLAMMABILITY RATING: UL: HORIZONTAL

CANADIAN OPTION
"PRINTING ILLUSTRATION"

RU AWM 22088 90C 150V LSHF 3M NU
cRU AWM 1A 90C 150V FT2 EU <50V

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
<http://www.3mconnectors.com>

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

INCH [MM]		
TOLERANCE - UNLESS NOTED		
[INCH]	±.1	±.01
[]	= DIM. FOR REFERENCE ONLY	

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				MAR 28, 2017 REDRAWN TO NEW FORMAT WITH DATA CHANGES	JNC	WL
DRAWING CODES	DIVISION CODE	DRW	DATE	MFG	DATE	
	EMSD	CASTIGLIONE	FEB 21, 2017			
DO NOT SCALE DRAWING	TOLERANCES EXCEPT AS NOTED	DRW	DATE	APPR	DATE	
		R. YANG	FEB 21, 2017	R. EDWARDS	FEB 21, 2017	
THIRD ANGLE PROJECTION	INCHES					
	MILLIMETERS	© 3M COPYRIGHT 2017 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.				
MAX SURFACE ROUGHNESS	INTERPRET PER ASME Y14.5 - 2009	TITLE ROUND CONDUCTOR FLAT LSHF CABLE, HF447 SERIES				
		CAGE NUMBER	SIZE	DRAWING NO.	REV.	
		D		78-5100-2343-1	C	
		MODEL	DEF	IS1S	YES	NO
		HF447				SHT 1 OF 2

78-5100-2343-1
DRAWING NUMBER
1:15B PM UTC-05:00
4/12/2017

3M™ ROUND CONDUCTOR FLAT LSHF CABLE, HF447 SERIES

.025" 30 AWG SOLID

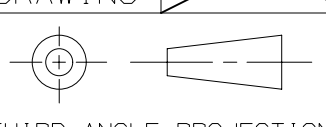


Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer: Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 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 OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

Unless otherwise noted, references to industry specifications are intended to indicate substantial compliance to the material elements of the specification. Such references should not be construed as a guarantee of compliance to all requirements in a given specification.

DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
C 72311		MAR 28, 2017				JNC	WL	
DO NOT SCALE DRAWING		SCALE	TOLERANCES EXCEPT AS NOTED	3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2017 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.		
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2009		MAX SURFACE ROUGHNESS		TITLE		
						ROUND CONDUCTOR FLAT LSHF CABLE, HF447 SERIES		
<input type="checkbox"/> MARKED ONLY		MILLIMETERS 0 ± .00 ± .000 ± .0000 ±		INCHES 0 ± .00 ± .000 ± .0000 ±		CAGE NUMBER D 78-5100-2343-1		REV. C
		ANGLES ±		MODEL HF447		DET. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		SHT 2 OF 2

78-5100-2343-1
 DRAWING NUMBER
 1:58 PM UTC-05:00
 4/12/2017