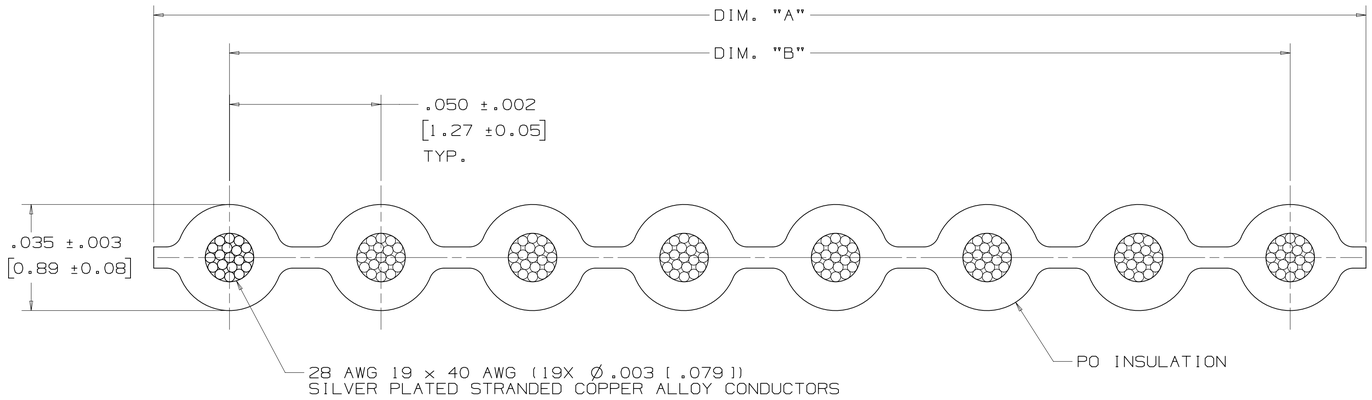
3M™ HIGH FLEX LIFE FLAT CABLE, HF319 SERIES

.050", 28 AWG STRANDED, HIGH FLEX LIFE, HALOGEN FREE PO



Note: Available in standard 100 ft and 300 ft rolls, please specify when ordering.
Contact 3M for availability of additional conductor counts and/or custom roll lengths.

NOTES

1. MATERIAL:
   A) PRIMARY INSULATION: HALOGEN FREE POLYOLEFIN (PO).
   B) CONDUCTORS: 28 AWG, 19 X 40 AWG SILVER PLATED STRANDED COPPER ALLOY
2. 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 NO: E42769.
   UL STYLE NO: 21682.
3. MARKINGS:
   STANDARD: NONE
   CANADIAN: SEE "PRINTING ILLUSTRATION" VIEW
   PRIMARY CABLE: BLUE MARK ON EDGES DESIGNATES WIRE NUMBER 1.
4. ENVIRONMENTAL:
   TEMP RATING: -40°C TO +105°C (EIA-364-32G, METHOD A, TEST CONDITION 2).

   -10°C TO +105°C (UL TEMPERATURE RATING)
   FLAMABILITY RATING: HORIZONTAL.
5. HALOGEN FREE IS DEFINED AS BOTH:
   1) NO HALOGEN COMPOUNDS THAT ARE INTENTIONALLY ADDED TO THE PRODUCT OR USED IN THE MANUFACTURING PROCESS FOR THE PRODUCT.
   2) ANY IMPURITIES PRESENT ARE LESS THAN 900 ppm BROMINE, LESS THAN 900 ppm CHLORINE AND/OR LESS THAN 1500 ppm TOTAL BROMINE AND CHLORINE. tHE LATTER ARE THE LEVELS SET FORTH IN CERTIAN INDUSTRY STANDARDS FOR PRINTED CIRCUIT BOARDS, SUCH AS THE INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) 61249-2-21 STANDARD. THIS INFORMATION REPRESENTS 3M/S KNOWLEDGE AND BELIEF WHICH MAY BE BASED IN WHOLE OR IN PART ON INFORMATION PROVIDED BY 3RD PARTY SUPPLIERS TO 3M.

ORDERING INFORMATION

X HF319/XX XX

- BLANK = STANDARD, C = CANADIAN
- NUMBER OF CONDUCTORS (SEE TABLE 1)
- BLANK = STANDARD, SF = SPLICE FREE

TABLE 1

DIMENSION CHART

NUMBER OF CONDUCTORS	3M PART NUMBER	DIMENSION 'A' ± AS NOTED	DIMENSION 'B' (SEE NOTE 2)
6	HF319/06	0.300"±0.010"	0.250"±0.007"
9	HF319/09	0.450"±0.010"	0.400"±0.007"
10	HF319/10	0.500"±0.010"	0.450"±0.007"
14	HF319/14	0.700"±0.010"	0.650"±0.007"
15	HF319/15	0.750"±0.010"	0.700"±0.007"
16	HF319/16	0.800"±0.015"	0.750"±0.011"
20	HF319/20	1.000"±0.015"	0.950"±0.011"
24	HF319/24	1.200"±0.015"	1.150"±0.011"
25	HF319/25	1.250"±0.015"	1.200"±0.011"
26	HF319/26	1.300"±0.015"	1.250"±0.011"
30	HF319/30	1.500"±0.020"	1.450"±0.015"
34	HF319/34	1.700"±0.020"	1.650"±0.015"
36	HF319/36	1.800"±0.020"	1.750"±0.015"
37	HF319/37	1.850"±0.020"	1.800"±0.015"
40	HF319/40	2.000"±0.020"	1.950"±0.015"
50	HF319/50	2.500"±0.020"	2.450"±0.015"
60	HF319/60	3.000"±0.020"	2.950"±0.015"
64	HF319/64	3.200"±0.020"	3.150"±0.015"

TABLE 2

ELECTRICAL CHARACTERISTICS

VOLTAGE RATING	USA: 300V, CANADA: 150V, EU: 50V	
INSULATION RESISTANCE	PRIMARY CABLE >1 X 10^{10} Ω/10 FT [3 m]	
	UNBALANCED	BALANCED
CHARACTERISTIC IMPEDANCE	100 Ω	169 Ω
CAPACITANCE	15.0 pf/ft [49.2 pf/m]	8.4 pf/ft [27.7 pf/m]
INDUCTANCE	0.15 µH/ft [0.49 µH/m]	0.24 µH/ft [0.79 µH/m]
PROPAGATION DELAY	1.48 ns/ft [4.86 ns/m]	1.42 ns/ft [4.66 ns/m]
VELOCTY OF PROPAGATION	68%	72%

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

ROLLING FLEX CYCLES PER EIA-364-41

RADIUS	MINIMUM CYCLES
1/2"	18 MILLION
3/4"	113 MILLION

ALL CYCLES WERE PERFORMED AT AMBIENT CONDITIONS.

"PRINTING ILLUSTRATION"

AWM 21682 105°C 300V HOR AWM 1A 105° 150V FT2 EU<50V

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

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REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
C	80477	SEP 06,2018 REVISED DATA AND NOTES	JNC	BPM
B	40826	MAY 22,2012 REVISED AND REDRAWN	JNC	SN

DESIGN REFERENCE | NEXT ASSEMBLY | ACCESS CODES

DRFT: CASTIGLIONE | DATE: MAY 15,2012 | MFG | DATE

CHKD | DATE | APPV: S. NEU | DATE: MAY 15,2012

DIVISION | DIVISION CODE: EMSD

DO NOT SCALE DRAWING | SCALE

TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±.1
.00 ±.05
.000 ±.010
.0000 ±
MILLIMETERS
0 ±2.5
.0 ±1.3
.00 ±.25
.000 ±
ANGLES ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2009

MAX SURFACE ROUGHNESS
☐ ALL SURFACES
☐ MARKED ONLY

3M Center, St. Paul, MN 55144

TITLE: HIGH FLEX LIFE, FLAT CABLE, 28 AWG STRANDED, HF319

CAGE NUMBER | SIZE: D | DRAWING NO.: 78-5100-2342-3 | REV.: C

MODEL: HF319 | DET LISTS ☐ YES ☒ NO | SHT 1 OF 2

78-5100-2342-3 DRAWING NUMBER | C REVISION

Imaged: Central Standard Time 9/7/2018 - UTC Offset (hrs) 6

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MAX SURFACE ROUGHNESS ☐ ALL SURFACES ☐ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES
.0 ±.1
.00 ±.05
.000 ±.010
.0000 ±

MILLIMETERS
0 ±2.5
.0 ±1.3
.00 ±.25
.000 ±

ANGLES ±

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CAGE NUMBER | SIZE: D | DRAWING NO.: 78-5100-2342-3 | REV.: C

MODEL: HF319 | DET LISTS ☐ YES ☒ NO | SHT 2 OF 2

78-5100-2342-3 (DRAWING NUMBER) C (REVISION)

OCEAN CHIPS
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