

.050" 28 AWG STRANDED, MASS TERMINATABLE, HALOGEN FREE PO/PO



HF 659 / XX XX XX

- BLANK = STANDARD
SF = SPLICE FREE

NOTE:
AVAILABLE IN STANDARD 275FT ROLLS. CONTACT 3M
FOR AVAILABILITY OF ADDITIONAL CONDUCTOR COUNTS
AND/OR CUSTOM ROLL LENGTHS.

2 PHYSICAL :

MARKING: STANDARD: NONE
CONDUCTORS: 28 AWG, 7 X 36 AWG [7 X Ø.127] TINNED STRANDED COPPER
SHIELDING: .001 [.03] THICK ALUMINUM/POLYESTER FILM FOIL AND 90%
COVERAGE TINNED COPPER BRAID.

2 ELECTRICAL :

	UNBALANCED	BALANCED
CHARACTERISTIC IMPEDANCE:	54Ω	107Ω
CAPACITANCE:	28.7 pF/ft [84.2 pF/m]	14.4 pF/ft [47.2 pF/m]
INDUCTANCE:	.08μH/ft [.27μH/m]	.16μH/ft [.52μH/m]
PROPAGATION DELAY:	1.55 ns/ft [4.95 ns/m]	1.54 ns/ft [4.95 ns/m]
VELOCITY OF PROPAGATION:	66%	66%

NOTE: UNBALANCED IS MEASURED BETWEEN GROUND-SIGNAL-GROUND CONDUCTORS.
BALANCED IS MEASURED BETWEEN CONDUCTORS WITHIN A PAIR.
"MEASURED VALUES ARE TYPICAL"

2 ENVIRONMENTAL :

FLAMMABILITY RATING: INTERNAL: HORIZONTAL FLAME PER UL758
EXTERNAL: CABLE FLAME (VERTICAL) PER UL758

INSULATION.
ARE THE LOW
LOW TOXICITY
-100-2-2006),
TERS AND
ION DAMAGE TO

ORE EASY ROUTING.

TERS PERMITS MASS
IDC CONNECTORS.

ALLOWS FOR MASS
RS.

b AVERAGE SHIELDING.

R BRANCHING OR

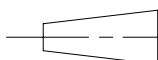
1. REGULATORY INFORMATION:
VISIT 3M.com/regs OR CONTACT
YOUR 3M REPRESENTATIVE TO FIND
THE RoHS COMPLIANCE STATUS OF
THE 3M PART YOU ARE INTERESTED
IN.

2. IN THE EVENT OF CONFLICT
BETWEEN THIS DATA AND THAT
CONTAINED IN THE PRODUCT
SPECIFICATION, THE PRODUCT
SPECIFICATION TAKES PRECEDENT.

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



INCH [MM]			
TOLERANCE - UNLESS NOTED			
	.X	.XX	.XXX
[INCH]	±.1	±.05	±.010
[] = DIM. FOR REFERENCE ONLY			

DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
ADDRESS CODES				DRFT	CASTIGLIONE		DATE	MFG	DATE
				CHKD			DATE	ABSL	DATE
						B - MIZE		MAY 29, 2018	
DIVISION		DIVISION CODE		 3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2018 This document and the information it contains are 3M property and may not be reproduced or further distributed without the 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.			
DO NOT SCALE DRAWING		TOLERANCES EXCEPT AS NOTED							
SCALE		INCHES		TITLE		ROUND, SHIELDED / JACKETED, FLAT, CABLE, .050", HF659			
THIRD ANGLE PROJECTION									
INTERPRET PER ASME Y14.5 - 2009		MILLIMETERS		CAGE NUMBER		SIZE DRAWING NO. D 78-5100-2335-7			
MAX. SURFACE ROUGHNESS									
MIN. SURFACES				MODEL		DET. ☐ YES ☒ NO SHT 1 OF 2			
MARKED ONLY		ANGLES		HF659					

