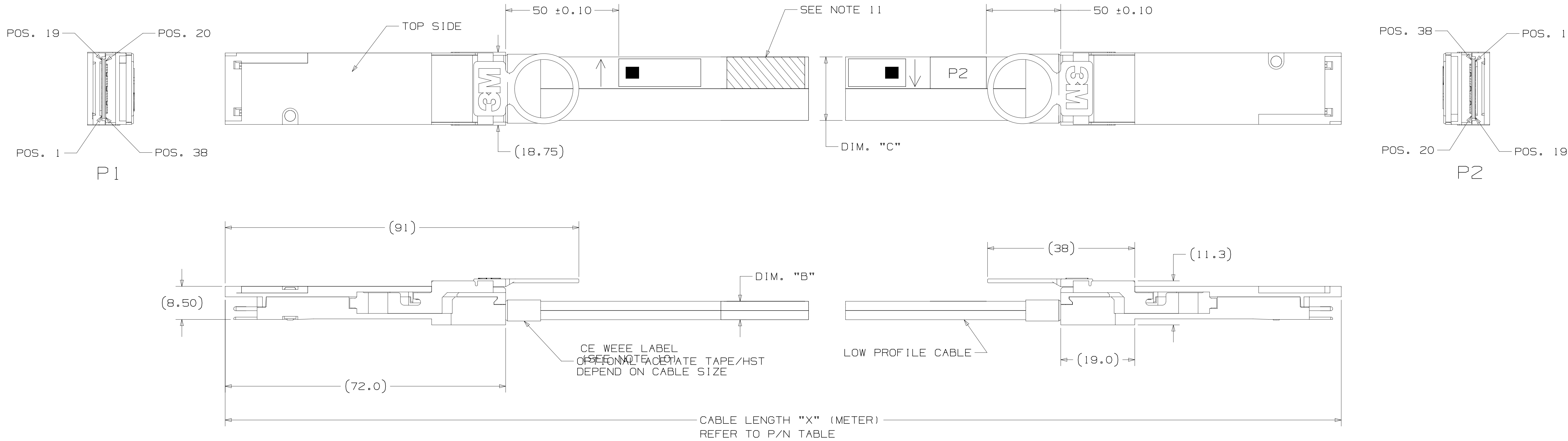


3M™ 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES



WIRING LIST			
P1 END		P2 END	
POS	SIGNAL	POS	SIGNAL
1	GND (TX)	20	GND (RX)
2	TX2n	21	RX2n
3	TX2P	22	RX2p
4	GND (TX)	23	GND (RX)
5	TX4n	24	RX4n
6	TX4P	25	RX4p
7	GND (TX)	26	GND (RX)
13	GND (RX)	32	GND (TX)
14	RX3p	33	TX3p
15	RX3n	34	TX3n
16	GND (RX)	35	GND (TX)
17	RX1p	36	TX1p
18	RX1n	37	TX1n
19	GND (RX)	38	GND (TX)
20	GND (RX)	1	GND (TX)
21	RX2n	2	TX2n
22	RX2p	3	TX2P
23	GND (RX)	4	GND (TX)
24	RX4n	5	TX4n
25	RX4p	6	TX4P
26	GND (RX)	7	GND (TX)
32	GND (TX)	13	GND (RX)
33	TX3p	14	RX3p
34	TX3n	15	RX3n
35	GND (TX)	16	GND (RX)
36	TX1p	17	RX1p
37	TX1n	18	RX1n
38	GND (TX)	19	GND (RX)


LOW SPEED SIGNALS	
P1 & P2	
POS	SIGNAL
8	ModSelL
9	ResetL
10	VccRx
11	SCL
12	SDA
27	ModPrsL
28	IntL
29	VccTx
30	VccI
31	LPMode

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7	PRODUCT LABEL	2
6	3M™ LOW PROFILE TWIN AXIAL CABLE	4
5	RIVET	2
4	PADDLE CARD	2
3	LATCH WITH PULL TAB	2
2	BOTTOM SHELL	2
1	UPPER SHELL	2
BALLOON ITEM	DESCRIPTION	QTY

DESIGN REFERENCE		NEXT ASSEMBLY	
DESIGN CODES			
DIVISION		DIVISION CODE	
		EMSD	
DO NOT SCALE DRAWING	SCALE 2 1	TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION		INCHES 0 ±.1	
INTERPRET PER ASME Y14.5 - 2018		MILLIMETERS 0 ±.1	
MAX SURFACE ROUGHNESS		0.00 ±.005	
MARKED SURFACES		0.00 ±.010	
MARKED ONLY		0.00 ±.005	

D	91871	JUL 16,2020		JNC	DLD
		ADD NOTE 11 AND LABELS			
C	86392	SEP 26,2019		JNC	DLD
		REVISE NOTES			
B	84769	JUL 17,2019		JNC	DLD
		ADDED CL2 CABLE OPTIONS			
A	74404	JUN 22,2017		YL	YL
		NEW RELEASE			
REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
DRFT	YUNLONG	DATE	MAR 02,2017	MFG	E. CHEN
DATE	MAR 02,2017	DATE	MAR 02,2017	DATE	MAR 02,2017
CHKD	YUNLONG	DATE	MAR 02,2017	DATE	MAR 02,2017
DATE	MAR 02,2017	DATE	MAR 02,2017	DATE	MAR 02,2017
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3M Center St. Paul, MN 55144					
TITLE					
100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES					
CAGE NUMBER	SIZE	DRAWING NO.			REV.
D	78-5100-2672-3	D			D
MODEL	OSFP28	DET.	LISTS	<input type="checkbox"/> YES <input type="checkbox"/> NO	SHT 1 OF 3

8

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3M™ 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES

NOTES:

1. ORDERING INFORMATION:
9QXX-114-XX-X.XX

ASSEMBLY LENGTH X IN METERS SEE TABLE 1

EEPROM MEMORY MAP
22= IEEE Std 802.3bJ-2014 100GBASE-CR4
XX= CUSTOMIZATION(SEE 3M SALES REP)

AWG
0= 30AWG (only for below and 2 meters)
6= 26AWG (only for 2 meters and above)

CABLE TYPE
J= 30AWG UTJ PVC JACKET WITH SHIELD (UP TO 2 METERS)
N= 30AWG CL2 JACKET WITH SHIELD (UP TO 2 METERS)
H= 26AWG UTJ PVC JACKET WITH SHIELD (2 TO 4.5 METERS)
M= 26 AWG CL2 JACKET WITH SHIELD (2 TO 4.5 METERS)

2. REFER TO TABLE 1 FOR CABLE LENGTH, WIDTH, THICKNESS AND WIRE AWG

3. PCB PINOUT DESIGNED TO SFF8436 SPECIFICATION

4. CABLE ASSEMBLY DESIGNED TO SFF 8661 & IEEE 802.3bJ SPECIFICATION

5. JACKET FOR CABLE TYPE J AND H: PVC, COLOR: BLACK
JACKET FOR CABLE TYPE N AND M: HALOGEN-FREE CL2, COLOR: BLACK
METAL SHELL: NICKEL PLATED ZINC ALLOY
PULL TAB: HALOGEN-FREE THERMOPLASTIC, COLOR: BLACK
PCB FOR CABLE TYPE J AND H: HALOGENATED FLAME RETARDANT
PCB FOR CABLE TYPE N AND M: HALOGEN-FREE FLAME RETARDANT
ASSEMBLIES WITH CABLE TYPE N AND M ARE FULLY HALOGEN-FREE

6. 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 CONTRUED AS A GUARANTEE OF COMPLIANCE TO ALL REQUIREMENTS IN A GIVEN SPECIFICATION.

7. PRODUCT SPECIFICATION REFER TO 3M DOCUMENT: 78-5102-0262-1

8. CABLE RETURN LOSS PERFORMANCE IS VALID FOR CABLE ASSEMBLIES OF A MINIMUM OF 1.00 METER IN LENGTH. CABLE ASSEMBLIES LESS THAN 1.00 METER IN LENGTH MAY NOT ACHIEVE THE RETURN LOSS PERFORMANCE IN IEEE802.3bJ. CABLE RETURN LOSS PERFORMANCE IS SUBJECT TO CHANGE WITH DIFFERENT CABLE ASSEMBLY LENGTHS. END USER WILL NEED TO DETERMINE WHETHER THIS PRODUCT IS SUITABLE FOR THEIR INTENDED APPLICATION.

9. FOR CUSTOM LENGTHS CONTACT A 3M SALES REPRESENTATIVE

10. HALOGEN-FREE IS DEFINED AS BOTH (1) NO HALOGEN COMPOUNDS ARE INTENTIONALLY ADDED TO THE PRODUCT OR USED IN THE MANUFACTURING PROCESS FOR THE PRODUCT, AND (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.

11. CE AND WEEE LABEL.
CE HEIGHT: MUST BE AT LEAST 5MM
WEEE HEIGHT: MUST BE AT LEAST 7MM.

TABLE 1

ORDERING INFORMATION	ASSY LENGTH="X" (m)	CABLE SIZE	LENGTH TOLERANCE (mm)	B NOMINAL (mm)	C NOMINAL (mm)		
9QJ0-114-22-0.50	0.50	30AWG	+10/-0	(2.8)	(15.0)		
9QJ0-114-22-1.00	1.00	30AWG	+50/-0				
9QJ0-114-22-2.00	2.00	30AWG					
9QH6-114-22-2.00	2.00	26AWG	(3.8)	(16.0)			
9QH6-114-22-3.00	3.00	26AWG					
9QH6-114-22-4.00	4.00	26AWG					
9QN0-114-22-1.00	1.00	30AWG CL2	+50/0	(3.5)	(17.8)		
9QM6-114-22-3.00	3.00	26AWG CL2		(6.0)	(18.5)		

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DESIGN REFERENCE

NEXT ASSEMBLY

REV

ECO

ISSUE DATE AND DESCRIPTION

DRFT

CHKD

91871	JUL 16,2020	JNC	DLD
ADD NOTE 11 AND LABELS			
86392	SEP 26,2019	JNC	DLD
REVISE NOTES			
84769	JUL 17,2019	JNC	DLD
ADDED CL2 CABLE OPTIONS			
74404	JUN 22,2017	YL	YL
NEW RELEASE			

3M

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100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES

CAGE NUMBER

SIZE

DRAWING NO.

REV.

MODEL

QSF28

LISTS

YES

NO

SHT 2 OF 3

8

7

6

5

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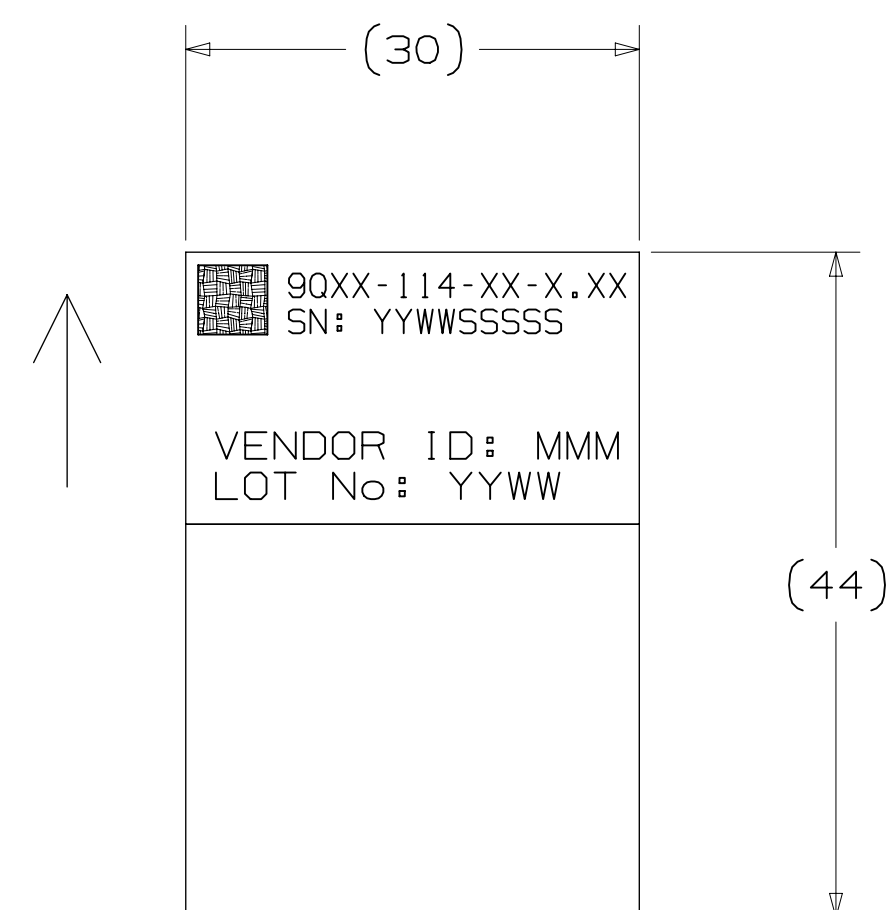
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2

1

Imaged: Central Standard Time 9/9/2020 -- UTC Offset (hrs) 6

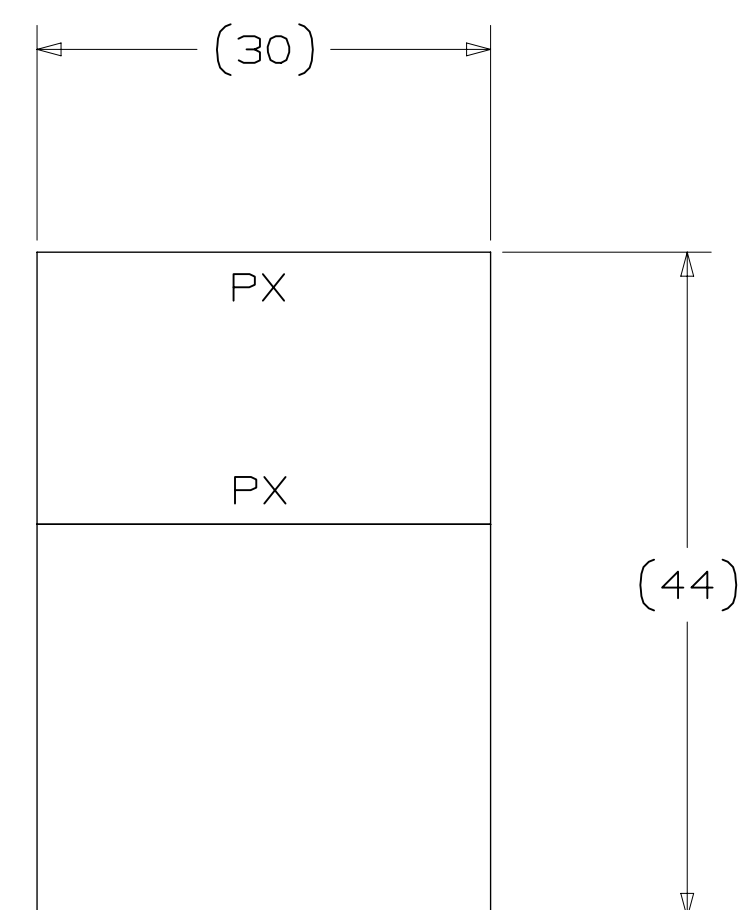
3M Company
Electronics Materials Solutions Division
13011 McCallen Pass, Bldg. C
Austin, TX 78753-5380
1-800-225-5373
www.3M.com/interconnect



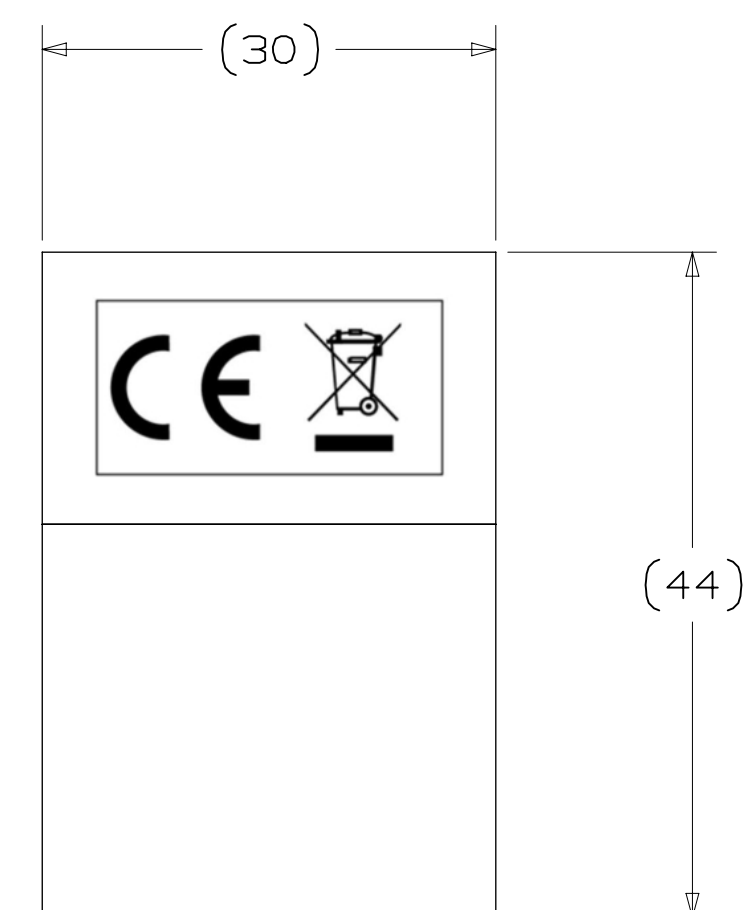
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9QXX-114-XX-X.XX (text string)
SN: YYWWSSSSS (text string)
    YY = 2 digit year
    WW = 2 digit week
    SSSS = 5 digit serialization (00001-99999)
BAR CODE IS: "9QXX-114-XX-X.XX" SPACE "YYWWSSSSS"



```



CE WEEE LABEL
(SEE NOTE 11)



D	91871	JUL 16,2020 ADD NOTE 11 AND LABELS	JNC	DLD
C	86392	SEP 26,2019 REVISE NOTES	JNC	DLD
B	84769	JUL 17,2019 ADDED CL2 CABLE OPTIONS	JNC	DLD
A	74404	JUN 22,2017 NEW RELEASE	YL	YL
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	YUNLONG	DATE MAR 02,2017	APPROV E. CHEN	DATE MAR 02,2017
CHKD	YUNLONG	DATE MAR 02,2017	APPROV BANDHU	DATE MAR 02,2017

DESIGN REFERENCE		NEXT ASSEMBLY		REV.	ECO	ISSUE DATE AND DESCRIPTION		DRAFT	CHKD
ASSEMBLY CODES				DWG# YUNL00G		DATE MAR 02, 2017	E. CHEN	DATE MAR 02, 2017	
				CHKD YUNL00G		DATE MAR 02, 2017	S. BANDHUJ	DATE MAR 02, 2017	
DIVISION		DIVISION CODE EMSD		© 3M COPYRIGHT 2020					
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 <p>THIRD ANGLE PROJECTION</p>		<p>INCHES</p> <p>.0 ± .00 ± .000 ± .0000 ±</p>		<p>TITLE</p> <p>100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 94Q SERIES</p>					
<p>INTERPRET PER ASME Y14.5 - 2018</p>		<p>MILLIMETERS</p> <p>0 ± .00 ± .00 ± .000 ±</p>		<p>CAGE NUMBER</p> <p>D 78-5100-2672-3</p>					
<p>MAX. SURFACE ROUGHNESS</p> <p>✓ <input type="checkbox"/> UNFINISHED SURFACES</p> <p>✓ <input type="checkbox"/> MARKED ONLY</p>		<p>ANGLES</p>		<p>MODEL</p> <p>QSF28</p>					
				<p>DET. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>SHT 3 OF 3</p>					

Mouser Electronics

Authorized Distributor

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3M:

[9QH6-114-22-4.00](#) [9QJ0-114-22-1.00](#) [9QH6-114-22-2.00](#) [9QM6-114-22-3.00](#) [9QN0-114-22-1.00](#) [7100217261](#)
[7100217262](#) [7100217273](#) [7100217274](#) [7100217275](#)