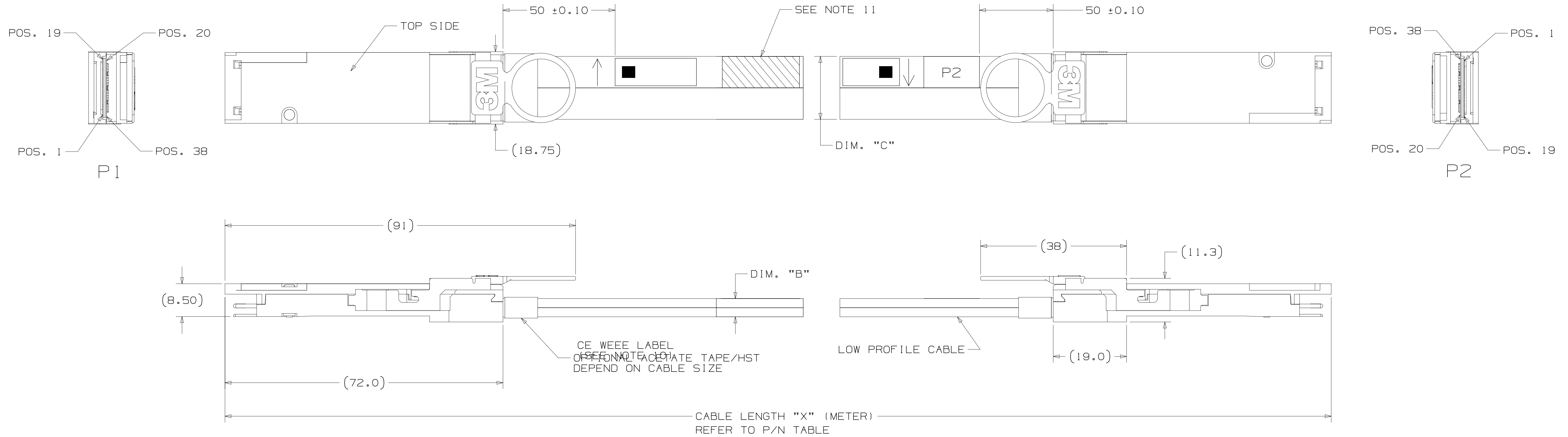


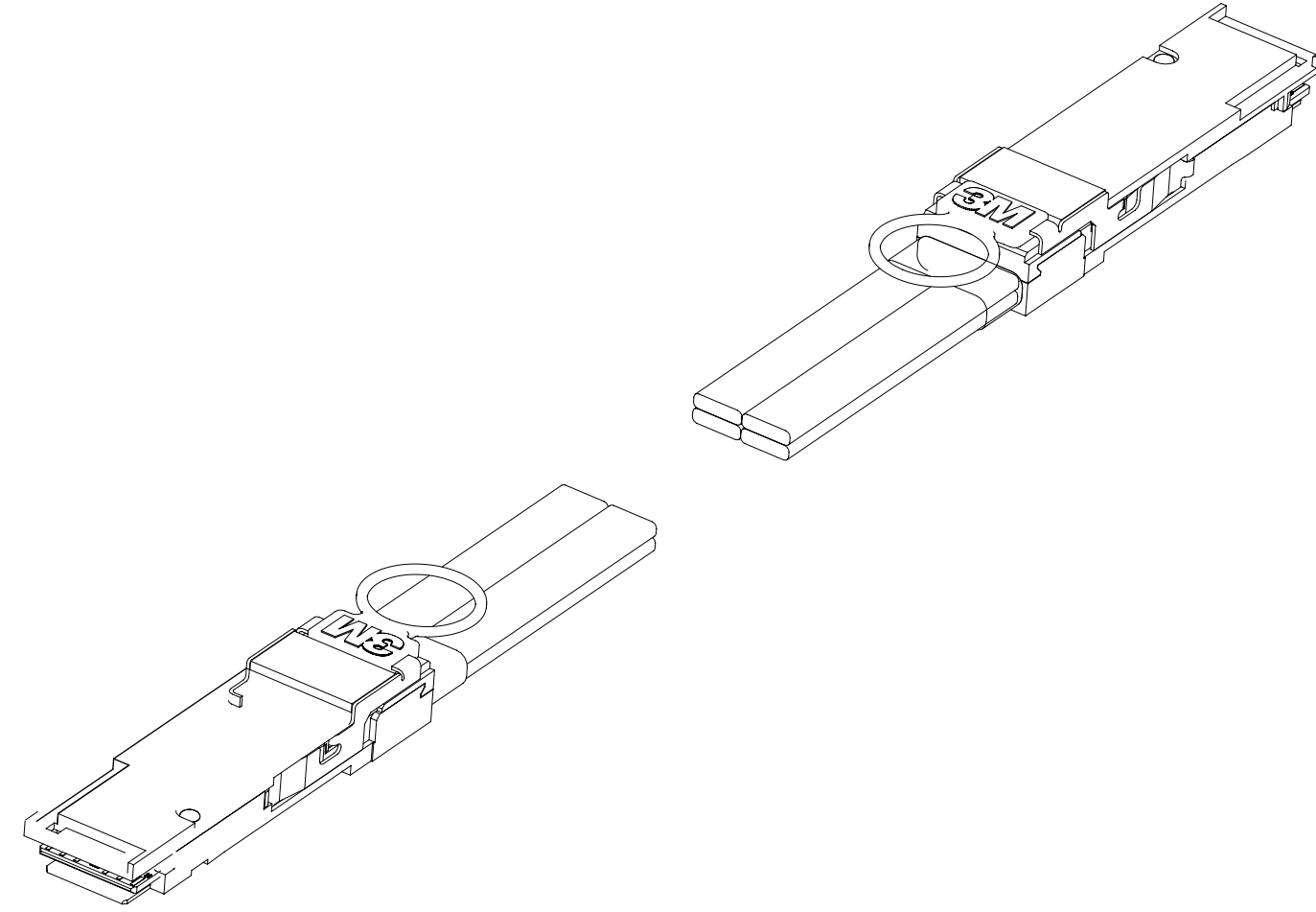
# 3M™ 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 90Q SERIES



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	ModSeIL
9	ResetL
10	VccRx
11	SCL
12	SDA
27	ModPrsL
28	IntL
29	VccTx
30	VccI
31	LPMode

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BALLOON ITEM	DESCRIPTION	QTY
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

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		YUNLONG		MAR 02, 2017 E. CHEN		MAR 02, 2017
		YUNLONG		MAR 02, 2017 S. BANDHU		MAR 02, 2017
DIVISION CODE: EMSD SCALE: 2/1 TOLERANCES EXCEPT AS NOTED: INCHES: .00 ± .000, .000 ± .000, .000 ± .000 MILLIMETERS: .0 ± .1, .00 ± .01, .00 ± .010, .000 ± .005 INTERPRET PER ASME Y14.5 - 2018 THIRD ANGLE PROJECTION MAX SURFACE ROUGHNESS: .125 SURFACES, .125 MARKED ONLY ANGLE: 45°						
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TITLE: 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 90Q SERIES CAGE NUMBER: D78-5100-2672-3 MODEL: QSFP28 SHEET: 1 OF 3						

78-5100-2672-3  
 DRAWING NUMBER  
 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 90Q SERIES  
 02/2017  
 REV. 1  
 3M

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

NOTES:


- ORDERING INFORMATION:  
 9QXX-114-XX-X.XX  
 ASSEMBLY LENGTH X IN METERS SEE TABLE 1  
 EEPROM MEMORY MAP  
 22= IEEE Std 802.3b<sub>J</sub>-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)
- REFER TO TABLE 1 FOR CABLE LENGTH, WIDTH, THICKNESS AND WIRE AWG
- PCB PINOUT DESIGNED TO SFF8436 SPECIFICATION
- CABLE ASSEMBLY DESIGNED TO SFF 8661 & IEEE 802.3b<sub>J</sub> SPECIFICATION
- 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
- 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.
- PRODUCT SPECIFICATION REFER TO 3M DOCUMENT: 78-5102-0262-1
- 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 IEEE802.3b<sub>J</sub>. 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.
- FOR CUSTOM LENGTHS CONTACT A 3M SALES REPRESENTATIVE
- 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.
- 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
		DRFT	YUNLONG	MAR 02,2017	E. CHEN	MAR 02,2017
		CHKD	YUNLONG	MAR 02,2017	S. BANDHU	MAR 02,2017
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DO NOT SCALE DRAWING	SCALE 2/1	TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± .0000 ± MILLIMETERS 0 ±.1 .0 ±.2 .00 ±.10 .000 ±.005 ANGLES ±.005				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	TITLE 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES CAGE NUMBER DRAWING NO. 78-5100-2672-3 MODEL OSFP28 DET. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SHT 2 OF 3				
MAX SURFACE ROUGHNESS	MARKED ONLY					

78-5100-2672-3  
 DRAWING NUMBER  
 6  
 REV. 1  
 TIME 9/9/2020 9:51:00 AM  
 UTC OFFSET (hrs)

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

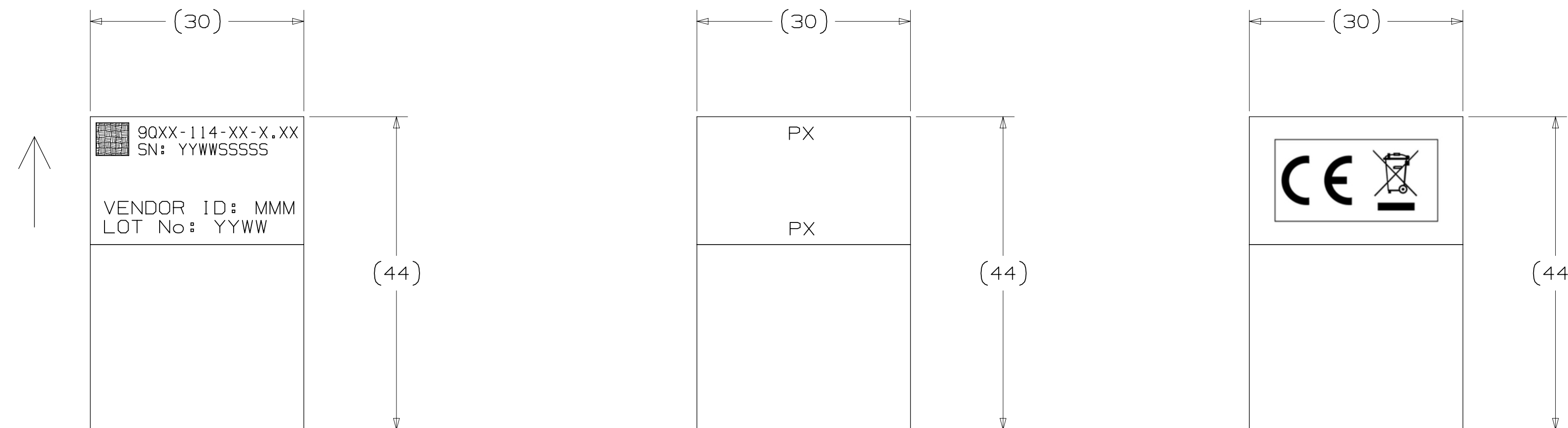
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LABEL DETAIL

90XX-114-XX-X.XX (text string)  
 SN: YYWWSSSS (text string)  
 YY = 2 digit year  
 WW = 2 digit week  
 SSSSS = 5 digit serialization (00001-99999)  
 BAR CODE IS: "90XX-114-XX-X.XX" SPACE "YYWWSSSS"

CE WEEE LABEL  
 (SEE NOTE 11)

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
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

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		YUNLONG		MAR 02, 2017 E. CHEN	MAR	02, 2017
		YUNLONG		MAR 02, 2017 S. BANDHU	MAR	02, 2017
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DO NOT SCALE DRAWING	SCALE 1/1	TOLERANCES EXCEPT AS NOTED		<b>TITLE</b> 100G QSFP28 DIRECT ATTACH COPPER CABLE ASSEMBLIES, 9Q SERIES		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS		CAGE NUMBER <b>D</b> 78-5100-2672-3		
MAX SURFACE ROUGHNESS	MARKED ONLY	INCHES		MODEL OSFP28		
		.00 ± .000 ± .0000 ±		REV. D		
		.0 ±0.2 .00 ±0.10 .000 ±0.005		SHEET 3 OF 3		

78-5100-2672-3  
 DRAWING NUMBER  
 REV 1  
 9/9/2020  
 UTC Offset (hrs) 6