

# by **HARMAN**

## Service Manual

## VPX725

Dual 15" High-Power Two-Way Speaker





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## **Professional Series**

## **Key Features:**

- ▶ 15" high efficiency woofer
- 1.5" annular polymer diaphragm compression driver
- ► Enclosure constructed of premium plywood and finished in black DuraFlex<sup>TM</sup> coating
- ► 70° × 60° (H × V) coverage pattern for even and smooth response on and off axis
- Heavy-duty 16-gauge protective screen backed steel grille
- ▶ 12 rigging points for suspension installation

## **Applications:**

- Sound reinforcement for live music and speech or prerecorded applications
- ▶ As satellite speaker for use with subwoofers

VPX725 is a dual 15" two-way speaker system designed for live music, speech or pre-recorded applications.

VPX725 uses a 1.5" JBL 2408H-1 annular polymer diaphragm neodymium compression driver to collaborate with two (2) 15" high efficiency woofers for acoustic reproduction of high power, low distortion and low power compression. The 15" woofers embed an optimal demodulating cooling aluminum ring, hence, stable performance is guaranteed even after long working hours. The speaker system creates a 70° × 60° (H × V) coverage pattern to ensure even and smooth response no matter on or off axis.

VPX725 is designed for versatile installation. Twelve (12) suspension points are available for flying mounting and convenient orientation adjust. Two (2) integral handles make it easier to transport and install.

The entire system presents itself in a professional and low profile manner and aims to provide prolonged reliability and durability to its users. The trapezoidal enclosure is constructed of quality plywood and finished in rugged DuraFlex<sup>TM</sup> coating to sustain frequent transit and set-up. The front grille is made from 16-gauge steel and backed with acoustically transparent fabrics to provide adequate protection to drivers and circuits inside.



## Dual 15" High-Power Two-way Speaker



## Specifications:

System:	
Frequency Range (-10 dB) <sup>1</sup> :	40 Hz - 20 kHz
Frequency Response (±3 dB) <sup>1</sup> :	60 Hz - 20 kHz
Coverage Pattern:	$70^{\circ} \times 60^{\circ} (H \times V)$
Crossover Mode:	Passive
Crossover Frequency:	1.9 kHz
Power Rating <sup>1</sup> :	900 W/1800 W/3600 W (Continuous/Program/Peak)
Sensitivity (1w@1m) <sup>2</sup> :	100 dB
Nominal Impedance:	4 Ohms
Maximum SPL <sup>3</sup> :	130 dB (136 dB peak)
Physical:	
LF Driver:	2 × 15" (381.00 mm) woofers
HF Driver:	$1 \times JBL 2408H-1$ tweeter
Enclosure:	Trapezoidal, 15/18 mm, plywood
Suspension / Mounting:	12 points (3@top, 3@bottom, 2@each side, 2@rear), M10 thread hardware
Transport:	$2 \times \text{die-cast}$ handles with backing cup
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16-gauge perforated steel with acousti- cally transparent black screen backing
Input Connectors:	2 × Neutrik® Speakon® NL-4
Dimensions $(H \times W \times D)$ :	1244 mm × 535 mm × 459 mm(49.0 in × 21.1 in × 18.1 in)
Net Weight:	44.86 Kg (98.90 lbs)

1 IEC standard, pink noise with 6 dB crest factor for 2 hours

2 Full space  $(4\pi)$  conditions

3 Calculated maximum SPL based on rated power handling

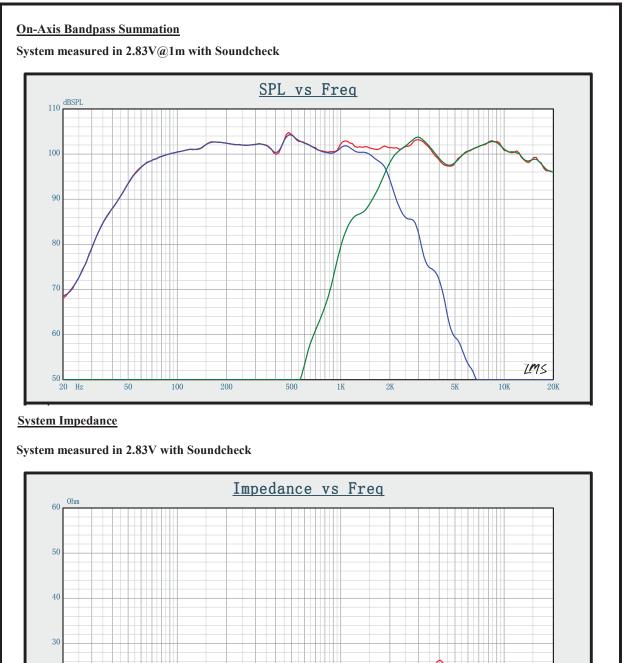
JBL continually engages in research related to product improvement. Some materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

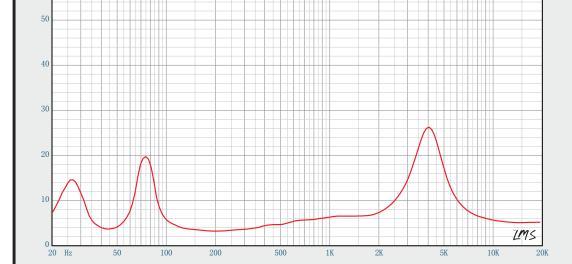
#### **Frequency Response:** Beamwidth: 110 36 dB Beamwidth (degrees) 100 100 SPL (dB) 90 80 -D- Horizontal - Vertical φ 10 ∟ 20 70 ∟ 20 100 1000 10000 20000 100 20000 1000 10000 Frequency (Hz) Frequency (Hz) **Directivity Index: Block Diagram:** 20 100 VPX725 JBL PROFESSIONAL Northridge, CA USA Designed in the USA HPF HIGH FREQ ແ 🕱 ດ Directivity Index (DI), dB NL4 IN / THRU Directivity Factor (Q) 24. 2-> LOW FREQ 10 10 LPF \_\_\_\_ NL4 IN / THRU LOW FREQ 2+ 0 L 20 100 1000 10000 20000 Frequency (Hz) **VPX700** IJBL **Dimensions:** Dimensions in mm 966.0 806 1238.8 1243.9 ė 15.0° 454.7 426.2 57.3 4- Ø 38.1 JBL ю Ć 409.2 58.9 PROFESSIONAL 32.5 358.8 534.9 JBL Professional 8500 Balboa Boulevard, P.O. Box 2200 Northridge, California 91329 U.S.A. © Copyright 2018 JBL Professional www.jblpro.com

VPX725 SZ 26/01/18

JBL Professional			Number 1000323747 Rev B
Engineering	Engineering Design Specification	Date Revised:	<b>Page</b> 1
	GENERAL DESCR	IPTION	
Model:	VPX7	25	
Description:	2x15"	two way, full range speaker	
<u> </u>	ACOUSTICAL AND ELECTRICA	AL SPECIFICATIONS	
Frequency Range (-1	0dB)40Hz	to 20KHz	
		attached curve, page2)	
System Input Type	Neuti	ik connector NL4MP	
	Impedance4 Ω		
System Power Hand	lingSee E	TS #1000323752	
Crossover Frequency	y1.9kI	Iz	
Sensitivity (1W@1n	n)100d	В	
Net Enclosure Volu Maximum External 1		DL hmm(H) x 535mm(W) x 459mm(D)	
	SYSTEM COMPON	<u>IENTS</u>	
Low Frequency Trans	sducer2x15	" woofer ( EDS #1000141211)	
	sducer1x24		
Crossover Network A	.ssembly5094	443-00	
	Design Engineer: <u>Ja</u>	son Wu	

JBL	Engineering	Date Effective:	Number
Professional	Standard	03/06/2018	1000323747
Engineering	Engineering Design Specification	Date Revised:	Rev B Page 2



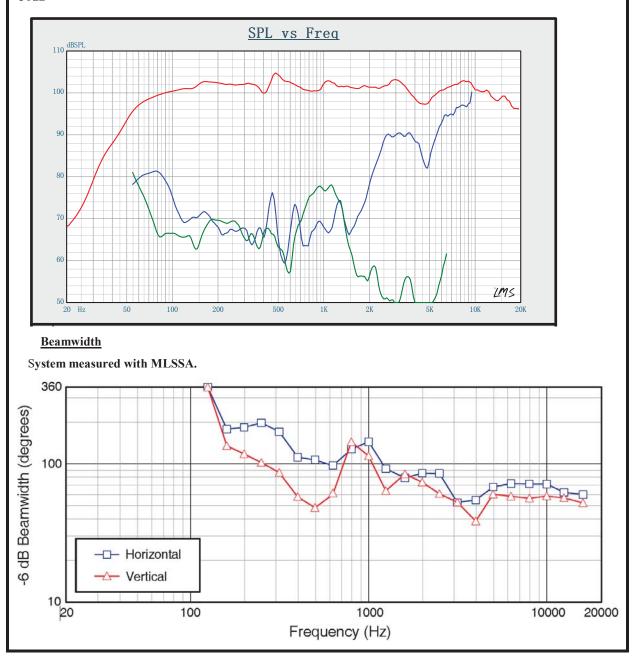


JBL	Engineering	Date Effective:	Number
Professional	Standard	03/06/2018	1000323747
Engineering	Engineering Design Specification	Date Revised:	Rev B Page 3

#### Harmonic Distortion

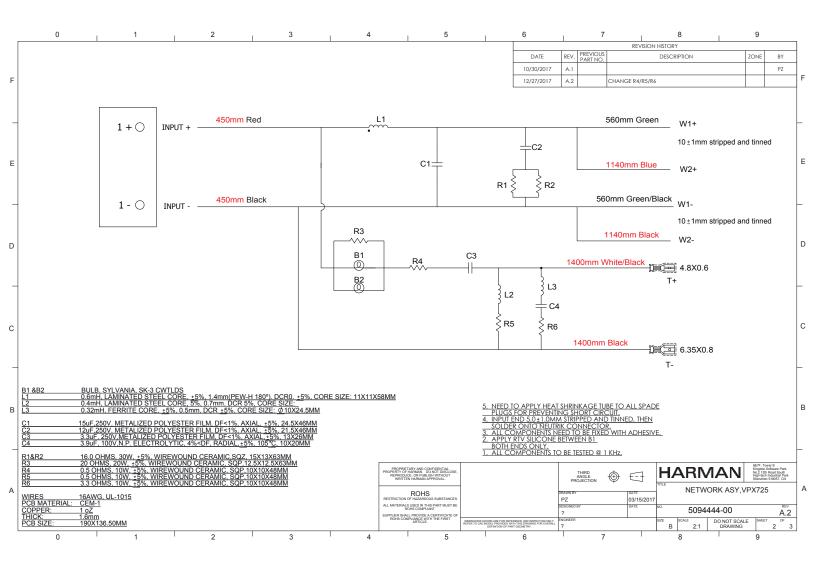
System measured in 2.83V@1m with Soundcheck

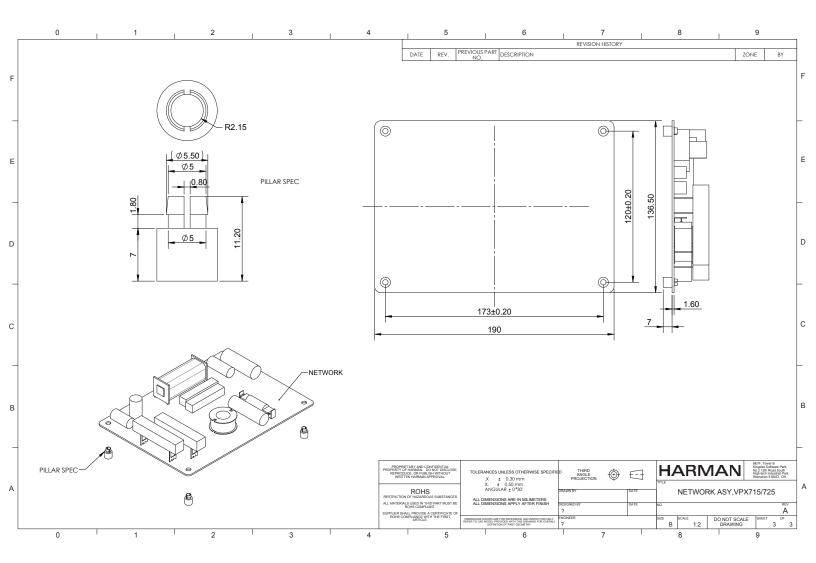
Red trace is the fundamental, blue trace is the 2nd harmonic +30dB, and the green trace is the 3rd harmonic +30dB

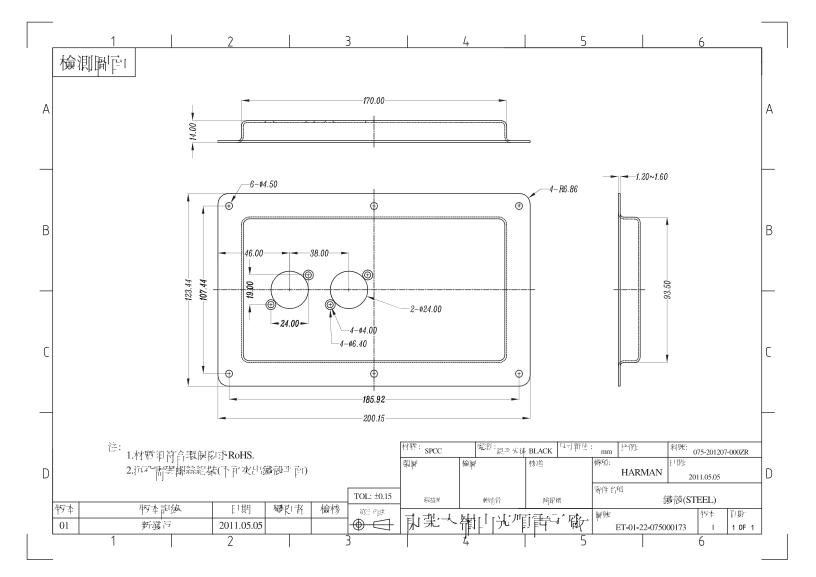


#### Revision History

Revision	Release Action	Date	<b>Rev Initials</b>
А		01/17/2018	Jason Wu
В		03/06/2018	Jason Wu







	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
0	VPX725	B.3 (Design)	S/M, VPX725				Released	
1	<sup>223</sup> <u>49790P</u>	C.9 (Design)	MICROFOAM 1/32X18X20			8 each	Released	
1		D.7 (Design)	TAPE,PKG,3"X3000LINFT			2 Meter	Released	
1		D.6 (Design)	RIBBON,XFR,THRM,4.5"x1181			4 Inch	Released	
1		D.1 (Design)	MFD ITEM, 2408H-1 (CHINA)			1 each	In Design	
2		C.9 (Design)	ADH,C.A.,SICO-MET	340	033	0.06 gram	Released	
2		C.7 (Design)	ADHES,LOCTITE 242	290	029	0.4 Milliliter	Released	
2		A.10 (Design)	LBL, DTC	450		1 each	Released	
3		D.6 (Design)	RIBBON,XFR,THRM,4.5"x1181			0.2 Meter	Released	
3		A.7 (Design)	LABEL, BLANK			1 each	Released	
2	🛱 <u>5006634</u>	A.7 (Design)	GLUE, LOCTITE 326	400		0.38 gram	Released	
2	🛱 <u>5012084</u>	A.6 (Design)	SERIAL NUMBER LABEL BLANK	430		1 each	Released	
2		A.7 (Design)	2408h-1 LABEL, CHINA	440		1 each	Released	
2		A.6 (Design)	SC97, 1MM SOLDER WIRE C512 CORE (CHINA)	410		1.2 gram	Released	
2	338430-001	B.3 (Design)	TOP PLATE, 2407H	70	007	1 each	Released	
2	<u>339133-001</u>	D.5 (Design)	MAGNET, 2.75"OD, 1.6"ID, 0.25THK	90	009	1 each	Released	
2	<u>352859-001</u>	C.8 (Design)	ADH, MOYEN 3087	210	020	0.2 Milliliter	Released	
2	<u>353219-001</u>	D.7 (Design)	ACTIVATOR, LOCTITE 7091, VARIOUS	390		0.085 Milliliter	Released	
2	353928-001	G.6 (Design)	VOICE COIL, 2408	60	006	1 each	Released	
2	353929-999D	A.5 (Design)	FINISHED, DIAPHRAGM, 2408(CHINA)	420		1 each	Released	

	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
3	<sup>2</sup> <u>5041338</u>	A.5 (Design)	3m twist and fill general purpose cleaner			1.135 Milliliter	Released	
3	353929-001	B.3 (Design)	DIAPHRAGM, 2408			1 each	Released	
4	361864-001	A.7 (Design)	DUPONT TEIJIN FILM TOENEX			27 Square inch	Released	
3	363073-001	C.8 (Design)	GLASS BEADS, COMCO INC., P/N PD1033-3			0.096 ounce	Released	
2	<u>353931-001</u>	A.6 (Design)	OUTER RING, DIAPHRAGM, 2408	250	025	1 each	Released	
2	<u>354063-001</u>	B.3 (Design)	BACKPLATE/POLE PIECE, 2408H	80	008	1 each	Released	
2	<u>354266-001</u>	C.5 (Design)	PSA, INNER RING, 2408H	350	034	2 each	Released	
2	<u>354312-001</u>	C.7 (Design)	PSA, OUTER	380	038	1 each	Released	
2	361513-001	C.7 (Design)	KAPTON FILM-TAPE, 5mm WIDE, 0.025 MM THK	180	017	0.2 Lineal Foot	Released	
2	361514-001	C.6 (Design)	TERMINAL BOARD, .250, 2408H	120	012	1 each	Released	
2	361514-002	C.6 (Design)	TERMINAL BOARD, .187, 2408H	130	013	1 each	Released	
2	361573-001	B.11 (Design)	PSA STRIP, 2408H	220	021	4 each	Released	
2	361574-001	A.4 (Design)	ADHESIVE, LOCKTITE E20-HP EPOXY	240	023	0.001 Milliliter	Released	
2	363122-001	C.8 (Design)	SILICONE SEALANT	300	030	0.28 gram	Released	
2	365009-001	C.6 (Design)	ADAPTER, 2408-1	10	001	1 each	Released	
2	365095-001	C.8 (Design)	RING, INNER, 2408H	260	026	1 each	Released	
2	365108-001	C.9 (Design)	RUBBER RING, 2408H-1	370	036	1 each	Released	
2	365173-001	D.3 (Design)	PHASING PLUG SQUARE, 2408-1	30	003	1 each	Released	
2	370-0000-00	E.3 (Design)	SCREEN, 7/8 DIA, EXIT	160	016	1 each	Released	
2		C.6	SCR,8-32 X 7/16,PAN,PH,CLR	150	015	4 each	Released	

	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
	<u>803-41000-07</u>	(Design)	ZINC,LCS					
2	CONSUMABLES	7 (Design)	ADHESIVES/PAINTS/CHEMICALS/ LABELS/ETCALL	0		0.505 Piece	Released	
1	<sup>2</sup> <u>5013165</u>	A.6 (Design)	STAPLE 8014 12.8mmX14mm			24 each	Released	
1	<sup>(2)</sup> <u>5019069</u>	B.6 (Design)	BARCODE BLANK LABEL CHINA 4SN			2 each	Released	
1	<sup>2</sup> <u>5041776</u>	C.9 (Design)	AUD,LS,ASY,KP4015 WOOF			2 each	Released	
2	<sup>2</sup> <u>5041382</u>	A.8 (Design)	XDCRMECH, DUST CAP, MQ85 WOOF			1 each	Released	
2	🛱 <u>5041684</u>	A.7 (Design)	XDCRMECH,CONE ASY,KP4015 WOOF			1 each	Released	
2	<sup>2</sup>	B.5 (Design)	XDCRMECH, VOICE COIL, MQ82			1 each	Released	
2	🛱 <u>5041732</u>	A.8 (Design)	XDCRMECH,BACK PLATE,MQ82 WF			1 each	Released	
2	🧱 <u>5041734</u>	A.8 (Design)	XDCRMECH, MAGNET, MQ82 WF			1 each	Released	
2	<sup>2</sup> <u>5041739</u>	A.9 (Design)	XDCRMECH, AL FRAM, MQ85 WF			1 each	Released	
2	<sup>3</sup>	C.4 (Design)	XDCRMECH, SPIDER, MQ85 WF			1 each	Released	
2	<sup>2</sup>	A.10 (Design)	XDCRMECH, EVA FRONT GKT, MQ85 WF			4 each	Released	
2	<sup>3</sup>	A.9 (Design)	XDCRMECH,EVA BACK GKT, MQ85 WF			4 each	Released	
2	🛱 <u>5041749</u>	C.5 (Design)	XDCRMECH, POLE PIECE, MQ85 WF			1 each	Released	
2	🛱 <u>5041750</u>	B.8 (Design)	XDCRMECH, RING, MQ85 WF			2 each	Released	
2		A.6 (Design)	XDCRMECH,TERMINAL POLE, MQ8 WF			1 PR Pair	Released	
2		B.6 (Design)	LBL,PRNT,KP4015 WOOF			1 each	Released	
3		B.7 (Design)	ART,LABEL,KP4015 WOOF			1 each	Released	
2		A.9 (Design)	XDCRMECH, TOP PLATE, KP4015 WOOF			1 each	Released	
1	<sup>2</sup> <u>5048167</u>	A.8 (Design)	POLY FIBER PAD, DANDONG			29 Square Foot SF	Released	

	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
1	🛱 <u>5081561</u>	B.1 (Design)	ENCL, CABINET, ASY, MRX725			1 each	Released	
2	🛱 <u>61861</u>	C.10 (Design)	T-NUT,10-32			32 each	Released	
2	<sup>(2)</sup> <u>70206</u>	C.8 (Design)	ADH,JOWAT-110-60,BROWN			0.026 gallon, US	Released	
2	<sup>2</sup>	C.12 (Design)	ADHESIVE, URETHANE			0.19 gallon, US	Released	
2	🛱 <u>5013163</u>	A.6 (Design)	NAIL F30 30mm LONG			32 each	Released	
2	🛱 <u>5058298</u>	A.8 (Design)	BASECOAT, BLACK CHEMTHANE 7030			0.952 gallon, US	Released	
2	🛱 <u>5058299</u>	B.7 (Design)	TOPCOAT, BLACK CHEMTHANE 1400			0.084 gallon, US	Released	
2	<u>362721-001</u>	A.5 (Design)	BONDO 494 DYNALITE FILLER			0.083 gallon, US	Released	
2	<u>364102-001</u>	C.6 (Design)	TAPE,3M,3"x50,GRY,3903			4 Meter	Released	
2	445955-001	A.15 (Design)	HDWR,BRKT,90DEGREE ASY			6 each	Released	
2	5089847-00	A.5 (Design)	ENCL,TOP PNL,MRX725			1 each	Released	
2	<u>5089848-00</u>	A.5 (Design)	ENCL, BOTTOM PNL,MRX725			1 each	Released	
2	5089849-00	A.5 (Design)	ENCL,FRONT PNL,MRX725			1 each	Released	
2	5089850-00	A.5 (Design)	ENCL,LEFT SIDE PNL,MRX725			1 each	Released	
2	5089851-00	A.5 (Design)	ENCL, RIGHT SIDE PNL, MRX725			1 each	Released	
2	<u>5089852-00</u>	A.5 (Design)	ENCL,REAR PNL,MRX725			1 each	Released	
2	<u>5089853-00</u>	A.5 (Design)	ENCL,STIFF_02 PNL,MRX725			2 each	Released	
2	5089855-00	A.5 (Design)	ENCL,STIFF_01 PNL,MRX725			2 each	Released	
2	5089857-00	A.5 (Design)	ENCL,T_B STANDOFF, MRX725			2 each	Released	
2	<u>5089858-00</u>	A.5 (Design)	ENCL,MID_STANDOFF,MRX725			1 each	Released	

	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
2	5090659-00	A.5 (Design)	ENCL, UPPER PORT PNL, MRX725			2 each	Released	
2	5090660-00	A.5 (Design)	ENCL,LOWER PORT_L,MRX725			1 each	Released	
2	5090661-00	A.5 (Design)	ENCL,LOWER PORT_R,MRX725			1 each	Released	
2	882-41410-15	B.4 (Design)	HDWR,FASTNR,SCR,ST4×15 PH,PAN, BLK ZINC			24 each	Released	
2	CONSUMABLES	7 (Design)	ADHESIVES/PAINTS/CHEMICALS/ LABELS/ETCALL			34.438 Piece	Released	
1	🏟 <u>5081568</u>	A.7 (Design)	SPKSYS, GRILLE, ASY, MRX725			1 each	Released	
2	🛱 <u>5081551</u>	A.4 (Design)	HDW, BDGE, FROFESSIONAL,MRX700			1 each	Released	
2	<sup>2</sup> <u>5081584</u>	A.4 (Design)	SPKSYS, GRL, MRX725			1 each	Released	
2	<u>445921-001</u>	A.11 (Design)	HDWR,SPRING,KP600			1 each	Released	
2	445922-001	A.10 (Design)	HDWR,FSTNR,LOCK-WASHER,KP600			1 each	Released	
1	🏟 <u>353445-001</u>	B.12 (Design)	FOOT, SRX			4 each	Released	
1	<sup>22</sup> <u>354267-001</u>	B.7 (Design)	HORN, MRX512, VARIOUS			1 each	Released	
1	😂 <u>362049-004</u>	D.7 (Design)	GASKET, MRX528S, 525			1 each	Released	
1	<sup>223</sup> <u>363125-001</u>	C.7 (Design)	GASKET, HANDLE MRX			2 each	Released	
1	😂 <u>5094442-00</u>	A.5 (Design)	SPEC SHEET, VPX725			1 each	Released	
1	<sup>223</sup> <u>5094443-00</u>	A.6 (Design)	INPUT, TERMINAL CUP, ASY, VPX725			1 each	Released	
2		A.4 (Design)	TERMINAL CUP, MRX715			1 each	Released	
2	<u>5094444-00</u>	A.4 (Design)	NETWORK, VPX725			1 each	Released	
2	5094445-00	A.6 (Design)	LAB, PRODUCT, VPX725			1 each	Released	
1	🏟 <u>5094446-00</u>	A.5 (Design)	LAB, POP STICKER, VPX725			1 each	Released	

	Number	Version	Name	Line Number	Find Number	Quantity	State	Reference Designator
1	<sup>2</sup> <u>5094447-00</u>	A.5 (Design)	SHPMAT, CARTON ,VPX725			1 each	Released	
1	🎒 <u>5094450-00</u>	A.7 (Design)	SPKSYS, HANDLE, ASY, VPX700			2 each	Released	
2	<u>362328-001</u>	B.8 (Design)	HANDLE ASSY, MRX			1 each	Released	
2	5095121-00	A.6 (Design)	LAB, HANDLE, PMMA, VPX700			1 each	Released	
1	<sup>2</sup> <u>5096420-00</u>	A.6 (Design)	SHPMAT,FRNT FLR,VPX725			1 each	Released	
1	💭 <u>5096421-00</u>	A.6 (Design)	SHPMAT,OUTR FLR,VPX725			2 each	Released	
1	🔯 <u>5096422-00</u>	A.6 (Design)	SHPMAT, INNER FLR, VPX725			2 each	Released	
1	 <u>804-01110-16</u>	9 (Design)	SCR,10-32 X 1,FIL,PH,BLK			16 each	Released	
1	804-11110-16	D.6 (Design)	SCR,10-32 X 1,FLT,PH,BLK ZINC,LCS			8 each	Released	
1	<u></u>	D.8 (Design)	SCR,10-32 X 3/4,PAN,PH,BLK ZINC,LCS			8 each	Released	
1	<u>818-13710-30</u>	A.6 (Design)	HDWR,FASTNR,SCR,M10×30 HED, FLAT, EDB			12 each	Released	
1	<u></u>	C.9 (Design)	SCR, 6 X 5/8,PAN,PH,PB,BLK ZINC,LCS			6 each	Released	
1	<u></u>	A.4 (Design)	SCR,PA4×30,PAN,PH,BLK ZINC			4 each	Released	
1	882-51110-12	C.10 (Design)	SCR, 6 X 3/4,OV,PH,PTCL,BLK ZC,LCS			26 each	Released	
1	<u>884-11110-12</u>	C.6 (Design)	SCR,10 X 3/4,FLT,PH,PB,BLK ZINC,LCS			8 each	Released	
1	<u>884-41110-12</u>	C.6 (Design)	SCR,10 X 3/4,PAN,PH,PB,BLK ZINC,LCS			4 each	Released	
1		NA.6 (Design)	SCR,MOD,TRUSS, PHIL,#8x.75,BLK			1 each	Released	
1	CONSUMABLES	7 (Design)	ADHESIVES/PAINTS/CHEMICALS/ LABELS/ETCALL			0.503 Piece	Released	