# SPECIFICATION

#### FOR

### CHINESE POWER SUPPLY CORDSET (PB FR)

CORD : RVV 300/500 3X1.00mm<sup>2</sup> PVC LEAD FREE

CUSTOMER : VPE/FARNELL

CUSTOMER'S PART No. : 2460379

VOLEX'S SPEC. REF. No.: 143024/5

ISSUE No. : 003

DATE : 12TH JULY 2021

#### CUSTOMER APPROVED :

APPROVED BY	:	
SIGNATURE	:	
APPROVED DATE	:	
No. OF PAGES	:	



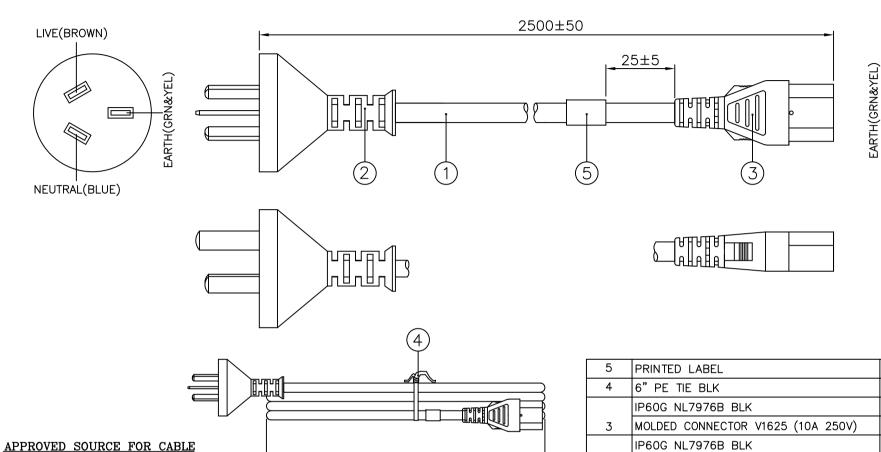
Volex (Asia) Pte Ltd

35 Tampines St. 92 Singapore 528880

Tel: (65) 6788 7833 Fax: (65) 6788 7822

# AMENDMENT RECORD

REF. No.	DESCRIPTION OF CHANGES	DATE
143024/5	(1) FIRST SUBMISSION.	06/11/14
(HG10-193-14)		
ISSUE : 001		
143024/5	(1) CHANGE CUSTOMER P/N FM. '1535166' TO '246Ø379' ON COVER PAGE	30/01/15
(HG01-293-15)	& ASSEMBLY DWG. PAGE.	
ISSUE : 002		
143024/5	(1) UPDATE BINGDING METHOD ON ASSEMBLY DWG. PAGE.	12/07/21
(VPE07-032-21)	(2) REMOVE CABLE SOURCE TY ON ASSEMBLY DWG. PAGE.	
ISSUE : 003	(3) REMOVE CABLE MARKING PAGE OF TY.	
	(4) UPDATE PLUG & CONN. SPEC PAGES.	



210±20

#### NOTE:

1. ALL DIMENSIONS IN mm.

1. BAO HING(SHENZHEN).

- 2. THE CORD SHALL COMPLY WITH GB/T5023-2008.
- 3. THE MOLDED PLUG SHALL COMPLY WITH GB2099.1-2008 AND GB1002-2008.
- 4. THE MOLDED CONNECTOR SHALL COMPLY WITH GB17465.1.
- 5. THE CORDSET SHALL COMPLY WITH CHINA RoHS.
- 6. LABEL DETAILS:

REFER TO LABEL DRAWING NO.: VL-0234.

7. THIS PART CAN BE MANUFACTURED AT ANY LOCATION WHICH HAS SAFETY APPROVAL.

5	PRINTED LABEL VL-0234				
4	6" PE TIE BLK	6310056	1		
	IP60G NL7976B BLK	4100115	_		
3	MOLDED CONNECTOR V1625 (10A 250V)	V1625	1		
	IP60G NL7976B BLK	4100115	_		
2	MOLDED PLUG V3203C (10A 250V)	V3203C	1		
1	RVV 300/500 3X1.00 BLK PVC LEAD FREE (CCC)	(CCC) 3212052			
S/N	DESCRIPTION ITEM NUMBER		QTY		
TITLE :	OUNTER DOWED CURRILY CORPORT (DR ED)				

LIVE(BROWN)

NEUTRAL(BLUE)

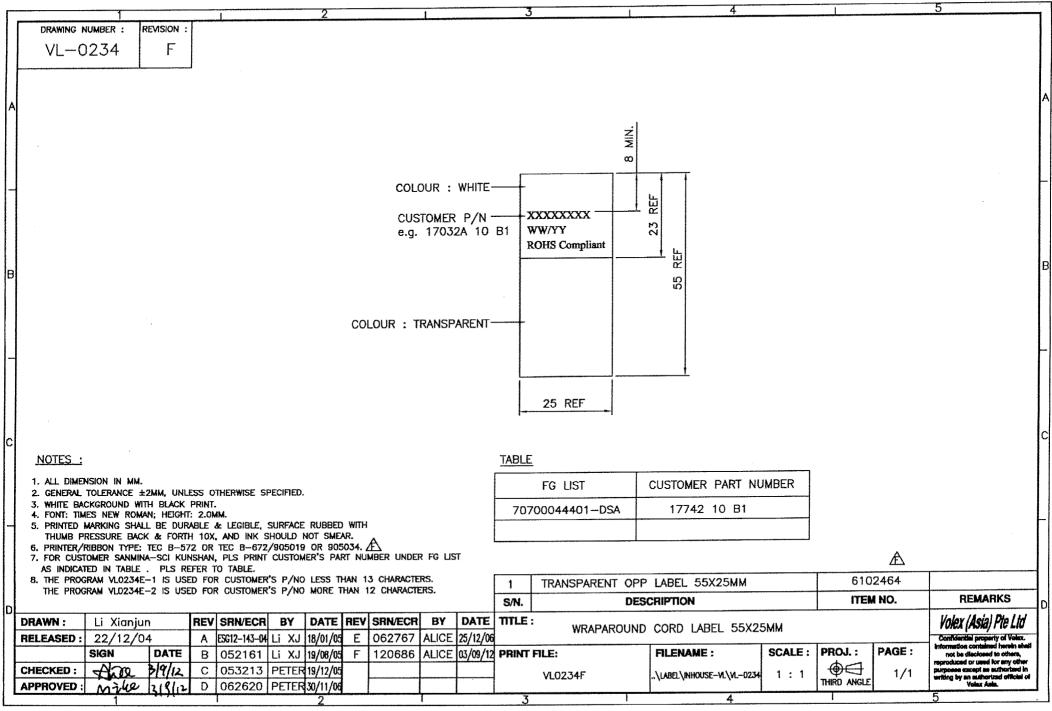
TITLE: CHINESE POWER SUPPLY CORDSET (PB FR) SCALE: N.T.S.

CUSTOMER: VPE/FARNELL PAGE: 1/1

CUSTOMER PART NUMBER: 246Ø379

Reference Number: 143024/5 (VPE07-032-21) 003

SALES :	QA:	ENGRG:	CHECKED BY :	DRAWN BY : MEI MAN	Volex (Asia) Pte Ltd
Date :	Date :	Date : 23-07-21	Date : 23-07-21	Date : 12/07/21	Confidential property of Volex. Information contained herein shall not be disclosed to others, reproduced or used for any other purposes except as authorized in writing by an authorized official of volex asia.



Form Number: OI-ENG-057-FM005(B)

REV.	DESCRIPTION	DATE
C	UPDATE VALUES AS PER PRODUCT SAFETY.	10/09/04
	CHANGE STANDARD NO. & CABLE OVERALL	
D	DIAMETER PER SAFETY.	16/10/09

### 1. PVC INSULATED AND JACKETED FLEXIBLE CORD

### 1.1 SCOPE

This specification shall be in accordance with GB/T5023-2008.  $\triangle$ 

### 1.2 CONSTRUCTION

CONDUCTOR	ANNEALED COPPER WIRE
INSULATION	PVC (BLUE, BROWN AND GREEN&YELLOW)
JACKET	PVC

ITEM	UNIT	SPEC. VALUE
TEMPERATURE RATING	.c	70
RATED VOLTAGE	V	300/500
NO. OF CORE	NO.	3
CONDUCTOR NOMINAL AREA	mm²	1.00
MIN. AVE. THICKNESS OF INSULATION	mm	0.60
MIN. THICKNESS AT ANY POINT OF INSULATION	mm	0.44
MIN. AVE. THICKNESS OF JACKET	mm	0.80
MIN. THICKNESS AT ANY POINT OF JACKET	mm	0.58
OVERALL DIAMETER OF JACKET	mm	6.3~8.0 🛕
VOLTAGE TEST — IMMERSED ON COMPLETED CABLE	_	2000 V for 5 mins (minimum)
IN WATER 20±5°C FOR ON CORES		1500 V for 5 mins (minimum)
INSULATION RESISTANCE TEST (70°C)	MΩ km	>0.01
CONDUCTOR RESISTANCE (20°C)	Ω/km	<=19.5

		ROVED 1	POWER	SUPPLY 2	CABLE
SPEC NO. :	APPROVED BY :	l i	ì	REVISION:	
CC 010CII	weto	hongly	HONGYAN	D	Volex
CS-019CH			DATE :	PAGE:	V UIEX
	la lalos	111 1-0	16/10/09	11/1 1	

	REV.	DESCRIPTION	DATE
i		ADD IN NEW MARKING PER ECN012-09.	
	Ε	ADD IN NOTE 1.	14/09/09
		REMOVE OLD MARKING PER ECRO91565.	
	F	REMOVE NOTE 1.	28/07/10

### CABLE MARKING

### BAO HING (SHENZHEN)

A

60227 IEC 53(RVV) 300/500V 3X1.0mm<sup>2</sup> ((C A002152 2002010105010385 BAOHING LF

A

DRAWN	1	, ,	FILE NAME :	TITLE : CABLE MARKING
CHECK	honalfr			
APPR	waits	28/7/10	uf (ccc) <del>-</del> ah	(CCC)
SCALE	N.T.S.	REV.	F	()

REFERENCE :

RW 300/500V 3X1.0mm<sup>2</sup> LF (CCC)



### 2. PLUG

REV	DESCRIPTION	DATE
AF	ADD IN CATALOGUE NO. MSGB10S2.	25/02/20
AG	ADD IN CATALOGUE NO.VNBGB10A3.	27/07/20

### 2.1. SCOPE

The plug shall be in accordance with GB2099.1-2008 and GB1002-2008.

### 2.2. CONSTRUCTION

The plug construction shall comply with our catalogue No: V301C, GB16C, V3203C, V3203CA, GB10S2, GB10S3, GB16CA, GB10BS, GB10A3, GB10DS2, GB16HA3 MFGB10S2, APGB10S3, APGB10S2, VNGB10S3, VNGB10S2, XMGB10A2, QMGB10A3, GB10FA2, SMGB10A3, SMGB10A3B, VBGB10S2, VNBGB10S2. VNBGB10S3, MSGB10S2 & *VNBGB10A3*.

### 2.3. CHARACTERISTICS

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
1.	Moisture resistance test	Samples are kept in a humidity cabinet containing air with a relative humidity between 91 to 95% and a temperature of 40±2°C for a duration of 48 hours.	No damage
2.	Electric strength	A voltage of A.C 2000V with a trip current of min. 100mA is applied for 1 min after the moisture resistance test	No flashover and breakdown
3.	Insulation resistance test	This test is measured after 1 min. application of D.C 500V after the moisture resistance test.	Min. 5 M Ohm
4	Pressure test	The plug is pressed with a force of 150N for 5 minutes.	The plug shall not have been deformed.
5.	Temperature rise	An alternating current of 10A (0.75mm <sup>2</sup> ), 12A	The temperature rise at
	test	(1mm <sup>2</sup> ) or 16A (1.5mm <sup>2</sup> ) is passed through poles for 1 hour.	any points shall not exceed 45°C.
6.	Bending test	The sample shall be loaded with a weight of 10N for 0.75mm <sup>2</sup> or 20N for 1.00mm <sup>2</sup> and bigger and the oscillating member shall be moved backward and forward through an angle of 90° (45° on either side of the vertical) the number of flexing being 10,000.A current of 10A (0.75mm <sup>2</sup> ) or 16A (1.0mm <sup>2</sup> and above) is passed through the conductors.	No damage and the voltage drop shall not exceed 10mV.
7	Pin pull test	A pull force of 50N is applied on the pins (in turn) after the plug has been aged for 1 hour at 70°C.	The displacement of the pin shall not be more than 1 mm.

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REFERENCE:	EFERENCE: Volex		Volex (Asia) Pte Ltd	
REV:	AG			
APPR:	Feng	27/07/20	CHINESE PLUG	
CHECK:	ROBAN	27/07/20		
DRAWN:	FAN LIAN	27/07/20	TITLE:	

TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
Tumbling test	The samples are dropped from a height of 50cm onto a steel plate (3mm thick) for a total of 1000 times. A torque of 0.4Nm is applied in one direction for 1 min. first then follow by the other	No damage and the pins shall not turn.
	direction for another min. on the pins.	
Cold impact test	The samples are kept in a refrigerator at a temperature of - 15±2°C for at least 16 hours. The samples are then allowed to fall by the hammer (1000g) from a height of 10cm.	No damage
Heat deformation test	The samples are kept for 1 hour in a heating cabinet at temperature of 100±5°C.	No damage
Heat pressure test	The samples are applied 20N (2.04kgf) at a temperature of 80±2°C for 1 hour.	No damage
Ageing test	The samples are kept for 168 hours in a heating cabinet at temperature of 70±2°C.	No damage
Pressure test II	The samples are applied 300N (30.6kgf) at a temperature of 20±2°C for 1 min.	No damage
Cord-anchorge	The cord is subjected to pulls of 50N (2.5A) or	The cord shall not be
test	60N (10/16A) force 100 times without jerk each lasting 1 sec.Thereafter the cord is subjected to a torque of 0.15Nm (2 core 0.75mm <sup>2</sup> ) or 0.25Nm	damaged and shall not been displaced by more than 2mm.
	(others) for 1 min.	
Ball pressure test		The diameter of the impression shall not
	125±5°C for 1 hour on the insert The sample is than cooled by cold water.	exceed 2mm.
Glow wire test	The tip of the glow wire heated electrically to 750±10°C shall be applied at the portion between the current-carrying pins and for a period of 30s. For all other parts, the wire is heated to 650±10°C.	Any flame and glowing shall extinguish within 30s after the removal of the glow-wire. There shall be no ignition of the tissue papernor sorching of the board.
	Tumbling test  Cold impact test  Heat deformation test Heat pressure test Ageing test Pressure test II Cord-anchorge test  Ball pressure test	Tumbling test onto a steel plate (3mm thick) for a total of 1000 times. A torque of 0.4Nm is applied in one direction for 1 min. first then follow by the other direction for another min. on the pins.  Cold impact The samples are kept in a refrigerator at a temperature of - 15±2°C for at least 16 hours. The samples are then allowed to fall by the hammer (1000g) from a height of 10cm.  Heat deformation test cabinet at temperature of 100±5°C.  The samples are kept for 1 hour in a heating cabinet at temperature of 100±5°C.  The samples are applied 20N (2.04kgf) at a temperature of 80±2°C for 1 hour.  Ageing The samples are kept for 168 hours in a heating cabinet at temperature of 70±2°C.  Pressure The samples are applied 300N (30.6kgf) at a temperature of 20±2°C for 1 min.  Cord-anchorge The cord is subjected to pulls of 50N (2.5A) or 60N (10/16A) force 100 times without jerk each lasting 1 sec. Thereafter the cord is subjected to a torque of 0.15Nm (2 core 0.75mm²) or 0.25Nm (others) for 1 min.  Ball pressure test A steel ball of 5mm in diameter is applied with 20N force on the sample at a temperature of 125±5°C for 1 hour on the insert The sample is than cooled by cold water.  Glow wire test The tip of the glow wire heated electrically to 750±10°C shall be applied at the portion between the current-carrying pins and for a period of 30s. For all other parts, the wire is heated to

DRAWN:	FAN LIAN	27/07/20	TITLE :
CHECK:	ROBAN	27/07/20	
APPR:	Feng	27/07/20	CHINESE PLUG
REV:	AG		
REFERENCE:			Volex (Asia) Pte Ltd
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### 3. CONNECTOR

REV	DESCRIPTION	DATE
ВС	ADD IN CATALOGUE NO. HPC13S.	31/08/20
BD	ADD IN CATALOGUE NO. VNBC5S.	05/01/21

#### **3.1. SCOPE**

The connector shall be in accordance with GB17465.1, Test specification - appliance couplers.

#### 3.2. CONSTRUCTION

The connector construction shall comply with our catalogue No:V1625, V1625A, VAC19, VAC5S, APC5S, APC5A, APC5M, VAC17S, VSCC13, APC13, APC13S, APC5SP, DLC5A3, VAC19A, APC5SM, APC13F, VAC15A, APC13G, VAC5AR, VAC13A, VAC13S, VSC19, PIC17S, VSCC15, VAC13KS, DLC5U3, V1625H, DLC5E3, V1625AT, APC5SF, VAC19KS, APC13H, V1625LA, VAC19HC, VAC17A, APC13HC, V1625BS, VNC13S, HWC13U, VNC5S, VAC13AU, VNC13A, V1625BA, VAC13AD, VAC19LA, SMC5S3, VNC21S SMC5S3B, VNBC13S, VSCC21, HPC13S & VNBC5S.

"All Connectors complying to Standard Sheet C5, C13, C15, C17, C19 & C21".

### 3.3. CHARACTERISTICS

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
1.	Moisture resistance	Samples are kept in a humidity cabinet con-	NO damage
	test	taining air with a relative humidity between 91	
		to 95% and a temperature of 40±2°C for a	
		duration of 48 hours.	
2.	Electric strength	Voltages of 3000V±60V and 1500V±60V, with	No flashover
	test	min. trip current of 100mA is applied for 60s±5s	and breakdown
		between current-carrying contact and body and	
		between each contacts respectively after the	
		moisture resistance tests.	
3.	Insulation resistance	This test is measured with a D.C 500V after the	Min. 5 M Ohm
	test	moisture resistance test.Readings are taken	
		after 60s ± 5s of application of voltage.	
4.	Withdrawal	i) Min. 1.5N (2N for 16A) - A single pin made	i) The pin with the weight
	force	to the minimum dimension is inserted into the	should not be withdrawn
	test	connector. The pin, together with the weight	from the connector for
		should exert a force of 1.5N (2N for 16A	more than 3 seconds.
	connector). Each individual pole of the		
		connector is tested seperately.	
		ii) Max. 50N (60N for 16A) - Insert and withdraw	ii) The connector shall be
		the connector from a socket having pin dimension	withdrawn from the socket.
		to the maximum and shroud dimension to the	If not the supplementary
		minimum for 10 times. The connector is then	weight is lifted from a
		inserted again into the socket hang with a total	height of 5cm and drop.
		weight of 50N(60N for 16A). The weight consist	The connector must be
		of a principal weight which is 90% of the total	withdrawn.
		weight and a supplementary weight of 10%.	
		The test is repeated for hot connector with	The test is repeated after
		temperature of 120°C±2°C on the pins.	temperature rise test.

DRAWN:	FUWANG	05/01/21	TITLE:
CHECK:	ROBAN	5/1/21	CHINESE CONNECTOR
APPR:	Chum	05/01/21	
REV:	BD		1
REFERENCE:			Volex (Asia) Pte Ltd
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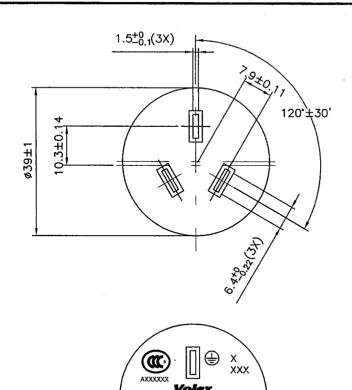
PAGE 1 OF 3

NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
5.	Glow wire test	Glow wire is applied for 30s - 750°C on inserts and housing retaining contacts - 650°C on elsewhere.	Flame (if any) shall be self-extinguished within 30s upon the removal of the glow wire and molten droplets shall not ignite paper.
6.	Bending test	The sample shall be loaded with a weight of 10N for 0.75mm <sup>2</sup> or 20N for 1.00mm <sup>2</sup> or bigger and the oscillating member shall be moved backward and forward through an angle of 90°(45° on either side of the vertical) the number of flexing being 20,000.A rated current is applied.  For round cord, the sample is turned 90 degree around the axis of cable after 10,000 cycles.  The flexing is further completed in this axis.  Flat cable is flexed only along the bigger axis of the cable.	There shall be no complete breakage of any of the conductors. Broken conductor shall not have pierced the insulation.
7.	Tumbling test	The sample is dropped from a height of 50cm onto a steel plate(3mm thick) for a total of 500 times.	No damage to impair further use of connector.
8.	Breaking Capacity test	The connector is connected and disconnected 50 times (100 strokes) with the inlet at a rate of 30 strokes per minute with 275V and 1.25 times of rated current.	No flashover or sustained arcing during the test and no damage to impair further use of connector.
9.	Normal operation test	Test is similar to breaking capacity except that the test voltage is 250V with the connector connected and disconnected with the inlet for 1000 times (2000 strokes) with rated current and 3000 times (6000 strokes) without current.	Withstand electric strength at 1500V for 1 min, and show no damage
10.	Temperature rise test	An alternating current at 1.25 times rated current is passed through the current carrying contacts for 1 hour. This is repeated for connector with earth contact passing current between earth and each of the current carrying contacts.	The temperature rise shall not exceed 45K.
11.	Cord-anchorage test	The cord is subjected to pulls of 50N(2.5A) or 60N(others) for 100 times each time for 1 sec. without jerk. Thereafter the cord is subjected for 1 min. to a torque of 0.15Nm(0.75mm <sup>2</sup> ) or 0.25Nm(others).	The cord shall not be damaged and shall not been displaced by more than 2mm.
12.	Heat deformation test	Samples are kept for 1 hour in a heating cabinet at temperature of 100±2°C.	No damage to impair further use of connector.

DRAWN:	FUWANG	05/01/21	_ TITLE:
CHECK:	ROBIN	5/1/21	CHINESE CONNECTOR
APPR:	Chum	05/01/21	
REV:	BD	)	<u></u>
REFERENCE:			Volex (Asia) Pte Ltd
			- I

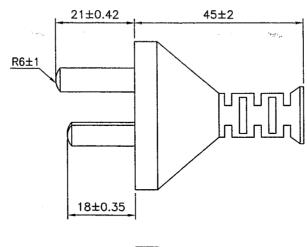
NO.	TEST ITEM	DESCRIPTION	ACCEPTANCE CRITERIA
13.	Heat pressure test	A pressure of 20N is applied at a temperature of $100^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour.	No damage to impair further use of connector.
14.	Aging test	The samples are kept for 168 hours in a heating cabinet at a temperature of 80±2°C.	No damage & marking shall be legible.
15.	Ball pressure test	A ball of 5mm in diameter is applied on the connector with the following temperature with 20N force for 1 hour. i) 125°C for hot connectors. ii) 125°C for parts retaining current carrying parts and earth circuit. iii) 75°C for other parts for cold connector. The connector is then cooled down to room temperature with cold water.	The diameter of the impression shall not exceed 2mm.

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REFERENCE:			Volex (Asia) Pte Ltd
REV:	BD	)	
APPR:	Chum	05/01/21	
CHECK:	ROBAN	5/1/21	CHINESE CONNECTOR
DRAWN:	FUWANG	05/01/21	TITLE:

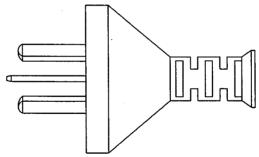


V3203C XXA 250V-

MARKING DETAILS



REV. DESCRIPTION DATE ADD IN MANU, LOCATION MARK 'SMI'. 05/02/10 15/09/10 ADD IN MANU, LOCATION 'BATAM' PER SAFETY.



#### NOTES :

- 1.) ALL DIMENSIONS IN mm.
- 2.) X CAVITY NO. (OPTIONAL).
- 3.) XXX MANUFACTURING LOCATION.
- 4.) XXA 250V~ RATING. (REFER TO TABLE 1)
- 5.) AXXXXXX FACTORY CODE. (REFER TO TABLE 2)

#### TABLE 1:

CURRENT (XXA)	6A	10A	
------------------	----	-----	--

#### TABLE 2:

(' X ' IS APPLICABLE ONLY)

COUNTRY	HENG GANG	ZHONGSHAN	HANOI	BATAM
FACTORY CODE	A001520	A001484	A002175	A072317

҈Ѧ	HG	HENG GANG (CHINA)	x	DRAWN	HONGYAN	15/09/10	1	TITLE :
	SM1/SMI VH	ZHONGSHAN (CHINA) HANOI (VIETNAM)	x	CHECK frong for		15/09/10	A-PLUG/CHINA/ CCC/GENERAL/	
				APPR	water	15/9/10	V3203C-CCC	
			X	REV.	N	SCALE	N.T.S.	
	В	BATAM (INDONESIA)	x	REFER	Voi			
	vc	CHENNAI (INDIA)			- c			
	MANUFACTURE LOCATION MARK			CHINESE APPROVAL				Information

 $\mathcal{M}$ 

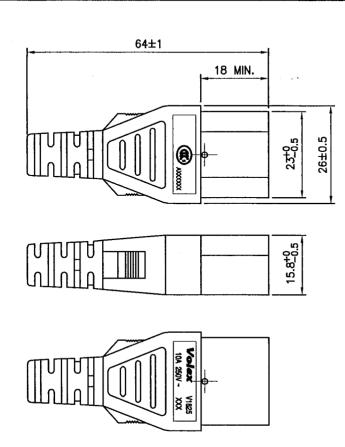
## Volex (Asia) Pte Ltd

MOLDED PLUG

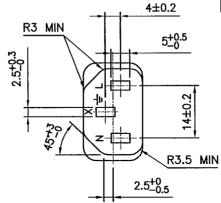
V3203C

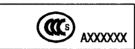
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REV.	DESCRIPTION	DATE
J	ADD IN MANU. LOCATION MARK 'SMI'.	08/02/10
К	ADD IN MANU. LOCATION MARK 'B'.	15/06/12

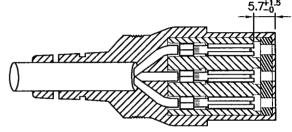




**Volex** V1625 10A 250V ~ XXX

MARKING DETAILS

(' X ' IS APPLICABLE ONLY)



#### TABLE:

COUNTRY	HENG GANG	ZHONGSHAN	HANOI	BATAM
FACTORY CODE	A001520	A001484	A002175	A072317

	HG	HENG GANG (CHINA)	Tx	DRAWN	XIAOZHI	15/06/12	FILE NAME :	TITLE :
			+	CHECK			A-CONNECTOR/CHINA /CCC/GENERAL/	мо
	SM1/SMI	ZHONGSHAN (CHINA)	X		Nex	146112	V1625-CCC	
	VH	HANOI (VIETNAM)	X	REV.	K	SCALE	N.T.S.	
Æ	В	BATAM (INDONESIA)	x	REFERENCE :				Voi
	VC.	CHENNAL (INDIA)						

MANUFACTURE LOCATION MARK

CHINESE APPROVAL

## Volex (Asia) Pte Ltd

MOLDED CONNECTOR

V1625

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#### NOTES:

- 1.) ALL DIMENSIONS ARE IN mm.
- 2.) X CAVITY NO.(OPTIONAL)
- 3.) XXX MANUFACTURING LOCATION
- 4.) AXXXXXX FACTORY CODE (REFER TO TABLE)