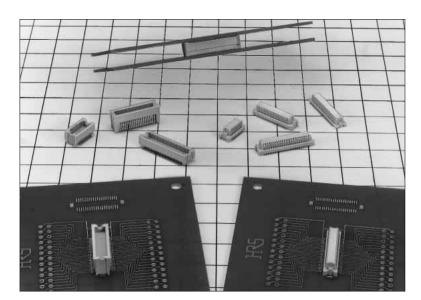
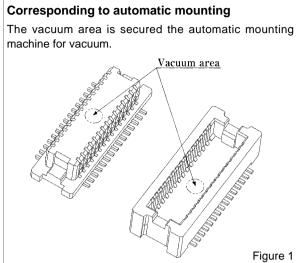
0.65mm Pitch SMT Board to Board Connector

DF15 Series





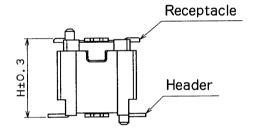
■Features

1. Compatibility of Miniaturization with Service Efficiency

This series considers the service efficiency to set the pitch to 0.65mm, corresponding to the 0.5mm pitch DF12 series. This connector widely covers the definition of the mounting space or the board to board size together with the DF12 series.

2. Broad Variations in Board to Board Size

The board to board size is specified at 1mm step between 4mm and 8mm.



Header/Receptacle	DF15#(0.8)-*DS-0.65V	DF15#(1.8)-*DS-0.65V
	Combinnation with H size	Combinnation with H size
DF15#(3.2)-*DP-0.65V	4	5
DF15#(4.2)-*DP-0.65V	5	6
DF15#(6.2)-*DP-0.65V	7	8

Note1: The stacking height is determined by adding the header and receptacle to the figures followed by the product name

Note2: The stacking height (H size) doesn't include the soldering paste thickness.

3. Correspond to Automatic Mounting

The connector has the vacuum area, which enables the automatic mounting by the embossed tape packaging.

4. Metal Fitting Available

The product including the metal fitting to prevent solder peeling is prepared, considering the mounting on FPC.

■Applications

Mobile phone, LCD(Liquid Crystal Display), MO(Optical Disk), Note PC

■Product Specifications

Rating	Current rating: 0.3A	Operating Temperature Range : -35 to +85°C (Note 1.)	Storage Temperature Range : −10 to +60°C (Note 2.)
Rating	Voltage rating: 50V AC	Operating Humidity Range: 40 to 80%	Storage Humidity Range : 40 to 70% (Note 2.)

Item	Specification	Condition				
1. Insulation Resistance	500M ohms min.	100V DC				
2. Withstanding Voltage	No flashover or insulation breakdown.	150V AC/1 minute				
3. Contact Resistance	50m ohms max	100mA				
4. Vibration	No electrical discontinuity of 1 μ s or more	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.				
5. Humidity (Steady state)	Contact resistance: 50m ohms max. Insulation resistance:250M ohms min.	96 hours at temperature of 40°C and humidity of 90% to 95%				
6 Tomporatura Cyala	Contact resistance : 50m ohms max.	(-55°C: 30 minutes 5 to 35°C: 10 minutes				
6. Temperature Cycle	Insulation resistance: 500M ohms min.	85℃: 30 minutes 5 to 35℃: 10 minutes) 5 cycles				
7. Durability (Mating/un-mating)	Contact resistance: 50m ohms max.	50 cycles				
9. Designation of the Coldering heat	No deformation of components affecting performance	Reflow: At the recommended temperature profile				
8. Resistance to Soldering heat	No deformation of components affecting performance.	Manual soldering: 350°C for 3 seconds				

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

Note 3: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

■Material

Product	Part	Material	Finish	Remarks
	Insulator	Polyamide	Beige	UL94V-0
Receptacle	Contact	Phosphor copper	Gold plated	
	Metal fitting	Brass	Tin plated	
	Insulator	Polyamide	Beige	UL94V-0
Header	Contact	Phosphor copper	Gold plated	
	Metal fitting	Brass	Tin plated	

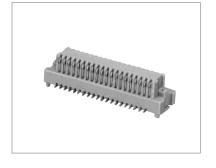
Note: The gold plated product of pin herder consists of a contact area of gold plated and lead of tin plated

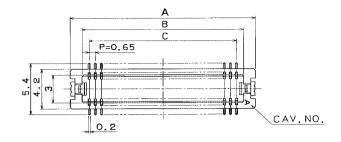
■Ordering Information

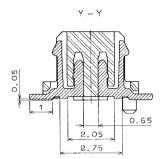
●Receptacle/Header

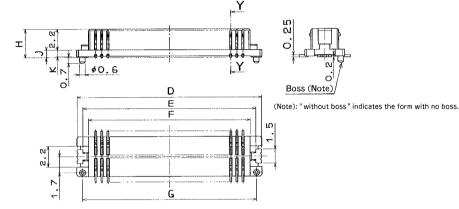
Series Name : DF15					Number of Contacts							
2 Ty	2 Type				20, 30, 40, 50							
		Fitting	Boss]	5 Connector Type							
	Blank		0		DS : Double-row receptacle							
	A × ○				DP : Double-row header							
	В 🔾 🗙			G Contact Pitch : 0.65mm								
	С	×	X									
					Contact type							
3 Pr	oduct heigh	nt			V : Straight SMT type							
Re	Receptacle : 0.8, 1.8			8 (56) : Embossed tape packaging								
He	Header : 3.2, 4.2, 6.2											

■Receptacle With metal fitting









[Specific No.] -* *, (* *) (56) :Gold plated embossed tape packaging

●Product Height: 0.8mm Product

Unit: mm

													~	
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Н	J	K	Remarks	RoHS
DF15 (0.8)-20DS-0.65V(56)	677-0002-0-56	20	9.85	7.35	5.85	9.65	8.45	7.35	8.65					
DF15 (0.8)-30DS-0.65V(56)	677-0003-3-56	30	13.10	10.6	9.1	12.9	11.7	10.6	11.9	2	0.8	0.7	With metal fitting	YES
DF15 (0.8)-40DS-0.65V(56)	677-0004-6-56	40	16.35	13.85	12.35	16.15	14.95	13.85	15.15	3	0.6	0.7	With boss	IES
DF15 (0.8)-50DS-0.65V(56)	677-0005-9-56	50	19.60	17.1	15.6	19.4	18.2	17.1	18.4					
DF15B(0.8)-20DS-0.65V(56)	677-0022-8-56	20	9.85	7.35	5.85	9.65	8.45	7.35	_					
DF15B(0.8)-30DS-0.65V(56)	677-0023-0-56	30	13.10	10.6	9.1	12.9	11.7	10.6	_	,	0.0	0.7	With metal fitting	YES
DF15B(0.8)-40DS-0.65V(56)	677-0024-3-56	40	16.35	13.85	12.35	16.15	14.95	13.85	_	3	0.8	0.7	Without boss	IES
DF15B(0.8)-50DS-0.65V(56)	677-0025-6-56	50	19.60	17.1	15.6	19.4	18.2	17.1 –	7.1 –					

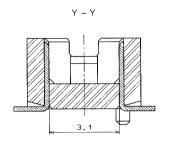
●Product Height: 1.8mm Product

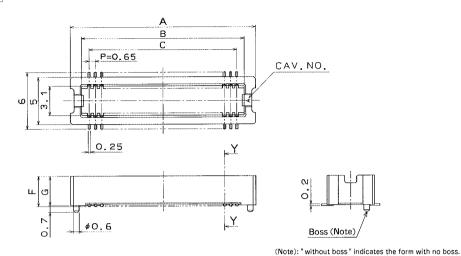
Unit: mm

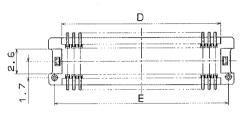
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Н	J	K	Remarks	RoHS
DF15 (1.8)-20DS-0.65V(56)	677-0042-5-56	20	9.85	7.35	5.85	9.65	8.45	7.35	8.65					
DF15 (1.8)-30DS-0.65V(56)	677-0043-8-56	30	13.1	10.6	9.1	12.9	11.7	10.6	11.9	4	4.0	4.7	With metal fitting With boss	YES
DF15 (1.8)-40DS-0.65V(56)	677-0044-0-56	40	16.35	13.85	12.35	16.15	14.95	13.85	15.15	4	1.8	1.7		IES
DF15 (1.8)-50DS-0.65V(56)	677-0045-3-56	50	19.6	17.1	15.6	19.4	18.2	17.1	18.4					
DF15B(1.8)-20DS-0.65V(56)	677-0062-2-56	20	9.85	7.35	5.85	9.65	8.45	7.35	-					
DF15B(1.8)-30DS-0.65V(56)	677-0063-5-56	30	13.1	10.6	9.1	12.9	11.7	10.6	-	- - 4 1.8	4.0	4.7	With metal fitting	YES
DF15B(1.8)-40DS-0.65V(56)	677-0064-8-56	40	16.35	13.85	12.35	16.15	14.95	13.85	-		1.8	1.7	Without boss	159
DF15B(1.8)-50DS-0.65V(56)	677-0065-0-56	50	19.6	17.1	15.6	19.4	18.2	17.1	_					

■Header Without metal fitting









[Specific No.] -* *, (* *) (56) :Gold plated embossed tape packaging

● Product Height: 3.2mm Product

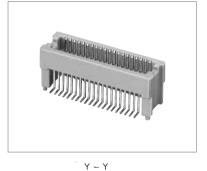
Unit: mm

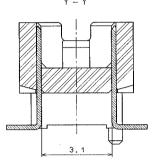
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Remarks	RoHS
DF15A(3.2)-20DP-0.65V(56)	677-0092-3-56	20	9.85	7.45	5.85	7.05	8.65				
DF15A(3.2)-30DP-0.65V(56)	677-0093-6-56	30	13.1	10.7	9.1	10.3	11.9	3.2	3.1	Without metal fitting	YES
DF15A(3.2)-40DP-0.65V(56)	677-0094-9-56	40	16.35	13.95	12.35	13.55	15.15	3.2	3.1	With boss	TES
DF15A(3.2)-50DP-0.65V(56)	677-0095-1-56	50	19.6	17.2	15.6	16.8	18.4				
DF15C(3.2)-20DP-0.65V(56)	677-0112-9-56	20	9.85	7.45	5.85	7.05	_	-			
DF15C(3.2)-30DP-0.65V(56)	677-0113-1-56	30	13.1	10.7	9.1	10.3	_		3.1	Without metal fitting	YES
DF15C(3.2)-40DP-0.65V(56)	677-0114-4-56	40	16.35	13.95	12.35	13.55	_	3.2	3.1	Without boss	TES
DF15C(3.2)-50DP-0.65V(56)	677-0115-7-56	50	19.6	17.2	15.6	16.8	_				

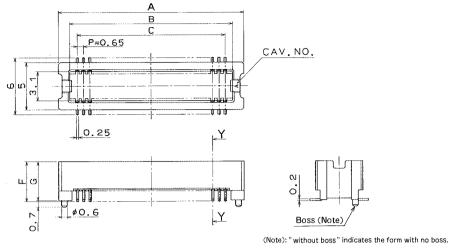
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.

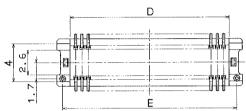
All non-Rohberg begins begins begins of the products status on the Hirose website Rohb search at www.hirose-connectors.com, or contact your Hirose sales representative.

■Header Without metal fitting









[Specific No.] -* *, (* *)

(56) :Gold plated embossed tape packaging

●Product Height: 4.2mm Product

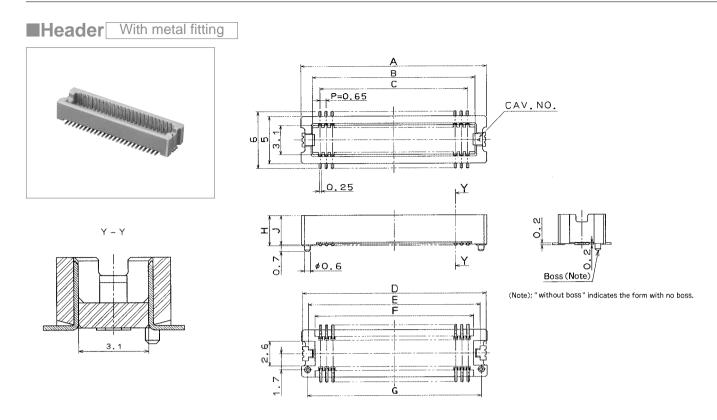
Unit: mm

	•												
	Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Remarks	RoHS	
	DF15A(4.2)-20DP-0.65V(56)	677-0132-6-56	20	9.85	7.45	5.85	7.05	8.65					
	DF15A(4.2)-30DP-0.65V(56)	677-0133-9-56	30	13.1	10.7	9.1	10.3	11.9	4.2	4.1	Without metal fitting	YES	
	DF15A(4.2)-40DP-0.65V(56)	677-0134-1-56	40	16.35	13.95	12.35	13.55	15.15	4.2	4.1	With boss	163	
	DF15A(4.2)-50DP-0.65V(56)	677-0135-4-56	50	19.6	17.2	15.6	16.8	18.4					
	DF15C(4.2)-20DP-0.65V(56)	677-0152-3-56	20	9.85	7.45	5.85	7.05	_					
	DF15C(4.2)-30DP-0.65V(56)	677-0153-6-56	30	13.1	10.7	9.1	10.3	_	4.0		Without metal fitting	YES	
	DF15C(4.2)-40DP-0.65V(56)	677-0154-9-56	40	16.35	13.95	12.35	13.55		4.2	4.1	Without boss	163	
ĺ	DF15C(4.2)-50DP-0.65V(56)	677-0155-1-56	50	19.6	17.2	15.6	16.8	-				vviiriout boss	

●Product Height: 6.2mm Product

Unit: mm

Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Remarks	RoHS
DF15A(6.2)-20DP-0.65V(56)	677-0172-0-56	20	9.85	7.45	5.85	7.05	8.65				
DF15A(6.2)-30DP-0.65V(56)	677-0173-3-56	30	13.1	10.7	9.1	10.3	11.9	6.0		Without metal fitting	YES
DF15A(6.2)-40DP-0.65V(56)	677-0174-6-56	40	16.35	13.95	12.35	13.55	15.15	6.2		With boss	TES
DF15A(6.2)-50DP-0.65V(56)	677-0175-9-56	50	19.6	17.2	15.6	16.8	18.4				
DF15C(6.2)-20DP-0.65V(56)	677-0192-8-56	20	9.85	7.45	5.85	7.05	-				
DF15C(6.2)-30DP-0.65V(56)	677-0193-0-56	30	13.1	10.7	9.1	10.3	_	6.0		Without metal fitting	YES
DF15C(6.2)-40DP-0.65V(56)	677-0194-3-56	40	16.35	13.95	12.35	13.55	_	6.2		Without boss	150
DF15C(6.2)-50DP-0.65V(56)	677-0195-6-56	50	19.6	17.2	15.6	16.8	_				

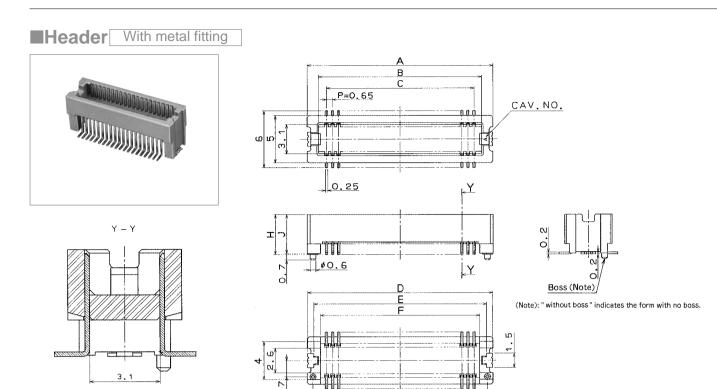


[Specific No.] -* *, (* *) (56) :Gold plated embossed tape packaging

● Product Height: 3.2mm Product

Unit: mm

Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Н	J	Remarks	RoHS
DF15 (3.2)-20DP-0.65V(56)	677-0082-0-56	20	9.85	7.45	5.85	9.65	8.45	7.05	8.65				
DF15 (3.2)-30DP-0.65V(56)	677-0083-2-56	30	13.1	10.7	9.1	12.9	11.7	10.3	11.9	3.2	3.1	With metal fitting With boss	YES
DF15 (3.2)-40DP-0.65V(56)	677-0084-5-56	40	16.35	13.95	12.35	16.15	14.95	13.55	15.15	5.15	3.1		IES
DF15 (3.2)-50DP-0.65V(56)	677-0085-8-56	50	19.6	17.2	15.6	19.4	18.2	16.8	18.4				
DF15B(3.2)-20DP-0.65V(56)	677-0102-5-56	20	9.85	7.45	5.85	9.65	8.45	7.05	_				
DF15B(3.2)-30DP-0.65V(56)	677-0103-8-56	30	13.1	10.7	9.1	12.9	11.7	10.3	_		24	With metal fitting	YES
DF15B(3.2)-40DP-0.65V(56)	677-0104-0-56	40	16.35	13.95	12.35	16.15	14.95	13.55	_		3.1	Without boss	153
DF15B(3.2)-50DP-0.65V(56)	677-0105-3-56	50	19.6	17.2	15.6	19.4	18.2	16.8	_				



[Specific No.] -* *, (* *) (56) :Gold plated embossed tape packaging

●Product Height: 4.2mm Product

Unit: mm

9												_	
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Н	J	Remarks	RoHS
DF15 (4.2)-20DP-0.65V(56)	677-0122-2-56	20	9.85	7.45	5.85	9.65	8.45	7.05	8.65				
DF15 (4.2)-30DP-0.65V(56)	677-0123-5-56	30	13.1	10.7	9.1	12.9	11.7	10.3	11.9	4.2	4.4	With metal fitting With boss	YES
DF15 (4.2)-40DP-0.65V(56)	677-0124-8-56	40	16.35	13.95	12.35	16.15	14.95	13.55	15.15	4.2	4.1		IES
DF15 (4.2)-50DP-0.65V(56)	677-0125-0-56	50	19.6	17.2	15.6	19.4	18.2	16.8	18.4				
DF15B(4.2)-20DP-0.65V(56)	677-0142-0-56	20	9.85	7.45	5.85	9.65	8.45	7.05	_				
DF15B(4.2)-30DP-0.65V(56)	677-0143-2-56	30	13.1	10.7	9.1	12.9	11.7	10.3	_	4.0		With metal fitting	YES
DF15B(4.2)-40DP-0.65V(56)	677-0144-5-56	40	16.35	13.95	12.35	16.15	14.95	13.55	_	4.2	4.1	Without boss	169
DF15B(4.2)-50DP-0.65V(56)	677-0145-8-56	50	19.6	17.2	15.6	19.4	18.2	16.8	_				

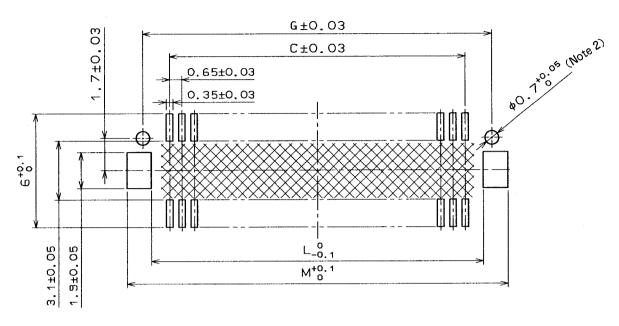
●Product Height: 6.2mm Product

Unit: mm

Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	F	G	Н	J	Remarks	RoHS
DF15 (6.2)-20DP-0.65V(56)	677-0162-7-56	20	9.85	7.45	5.85	9.65	8.45	7.05	8.65				
DF15 (6.2)-30DP-0.65V(56)	677-0163-0-56	30	13.1	10.7	9.1	12.9	11.7	10.3	11.9	6.0	6.1	With metal fitting	YES
DF15 (6.2)-40DP-0.65V(56)	677-0164-2-56	40	16.35	13.95	12.35	16.15	14.95	13.55	15.15	6.2	6.1	With boss	IES
DF15 (6.2)-50DP-0.65V(56)	677-0165-5-56	50	19.6	17.2	15.6	19.4	18.2	16.8	18.4				
DF15B(6.2)-20DP-0.65V(56)	677-0182-4-56	20	9.85	7.45	5.85	9.65	8.45	7.05	-				
DF15B(6.2)-30DP-0.65V(56)	677-0183-7-56	30	13.1	10.7	9.1	12.9	11.7	10.3	_		C 4	With metal fitting	YES
DF15B(6.2)-40DP-0.65V(56)	677-0184-0-56	40	16.35	13.95	12.35	16.15	14.95	13.55	-	6.2	6.1	Without boss	IES
DF15B(6.2)-50DP-0.65V(56)	677-0185-2-56	50	19.6	17.2	15.6	19.4	18.2	16.8	1				

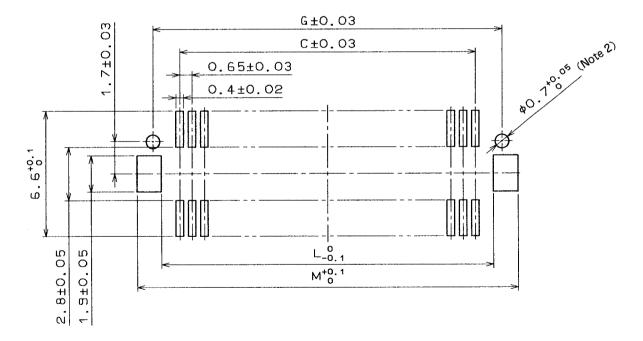
Receptacle

(Unit: mm)



Note1: XX If the pattern is included in the shaded area, and not treated with resist, it could touch the connector contact.

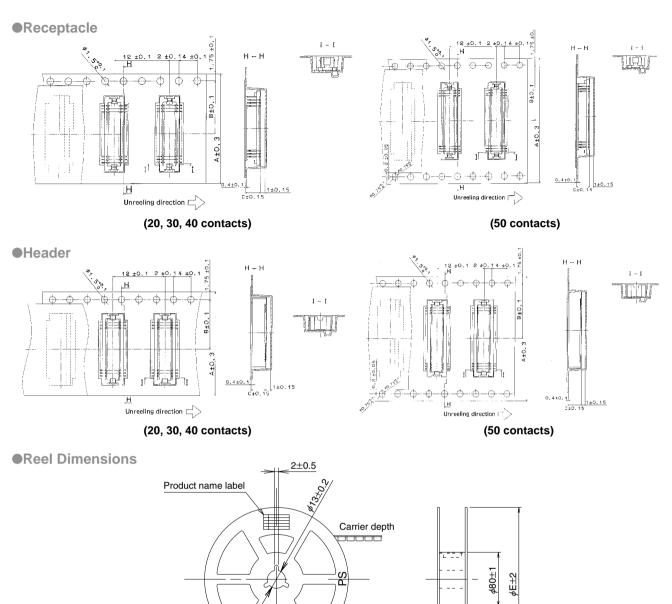
●Header (Unit: mm)



Unit: mm

Number of Contacts	С	G	L	М
20	5.85	8.65	7.85	10.25
30	9.1	11.9	11.1	13.5
40	12.35	15.15	14.35	16.75
50	15.6	18.4	17.6	20

● Embossed Carrier Tape Dimensions



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E	D	С	В	Α	Connector	Е	D	С	В	Α	Connector
	17.5	3.5	7.5	16	DF15#(3.2)-20DP-0.65V		17.5	3.3	7.5	16	DF15#(0.8)-20DS-0.65V
	25.5	3.5	11.5	24	DF15#(3.2)-30DP-0.65V		25.5	3.3	11.5	24	DF15#(0.8)-30DS-0.65V
	25.5	3.5	11.5	24	DF15#(3.2)-40DP-0.65V	330	25.5	3.3	11.5	24	DF15#(0.8)-40DS-0.65V
330	33.5	3.5	14.5	32	DF15#(3.2)-50DP-0.65V		33.5	3.3	14.2	32	DF15#(0.8)-50DS-0.65V
	17.5	4.5	7.5	16	DF15#(4.2)-20DP-0.65V		17.5	4.3	7.5	16	DF15#(1.8)-20DS-0.65V
	25.5	4.5	11.5	24	DF15#(4.2)-30DP-0.65V		25.5	4.3	11.5	24	DF15#(1.8)-30DS-0.65V
	25.5	4.5	11.5	24	DF15#(4.2)-40DP-0.65V		25.5	4.3	11.5	24	DF15#(1.8)-40DS-0.65V
	33.5	4.5	14.5	32	DF15#(4.2)-50DP-0.65V		33.5	4.3	14.2	32	DF15#(1.8)-50DS-0.65V
	17.5	6.5	7.5	16	DF15#(6.2)-20DP-0.65V						
200	25.5	6.5	11.5	24	DF15#(6.2)-30DP-0.65V						
380	25.5	6.5	11.5	24	DF15#(6.2)-40DP-0.65V						
1	33.5	6.5	14.5	32	DF15#(6.2)-50DP-0.65V						

 D_{0}^{+2}

2±0.5

Precautions

