DC-DC Converter Short Form

MPDRX303S,304S (Ultra High Speed / Low profile / 26A output POL)

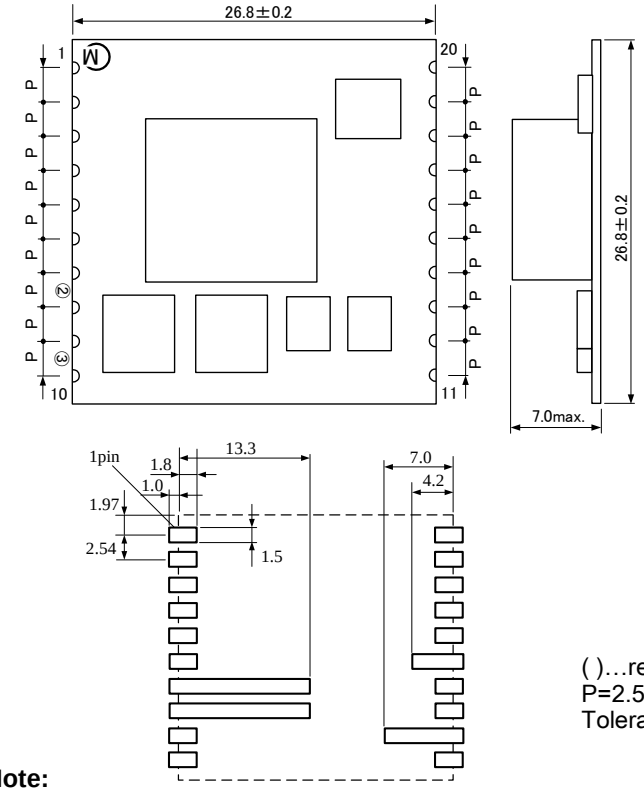
■ Features

- Wide Input Voltage (5.6-14V)
- Wide Output Voltage
  (0.8-1.65V:MPDRX304S , 1.6-3.63V:MPDRX303S)
- MAX 26A Output Current
- Very High Speed Response
- Short Circuit Protection Available
- On/Off Control Function Available
- Two Power Good Signal Output Terminals
- Variable Start-up Speed (by external capacitor)

■ GENERAL SPECIFICATIONS (Ta=-40 ºC to +85ºC)

Item	Symbol	Condition	MIN.	TYP.	MAX.	UNIT
Input Voltage	Vin		5.6	9.6	14	V
Output Voltage	Vout	Vin=9.6V MPDRX304S	0.8		1.65	V
		Vin=9.6V MPDRX303S	1.6		3.63	
Output Current	Iout		0		26	A
Ripple Voltage	Vrip	Vin=9.6V, Vo=1.2V, Io=26A. -304S		15		mVpp
		Vin=9.6V, Vo=3.3V, Io=26A. -303S		20		
Efficiency	EFF	Vin=9.6V, Vo=1.2V, Io=26A. -304S		84		%
		Vin=9.6V, Vo=3.3V, Io=26A. -303S		90		

■ DIMENSIONS PIN DESCRIPTIONS



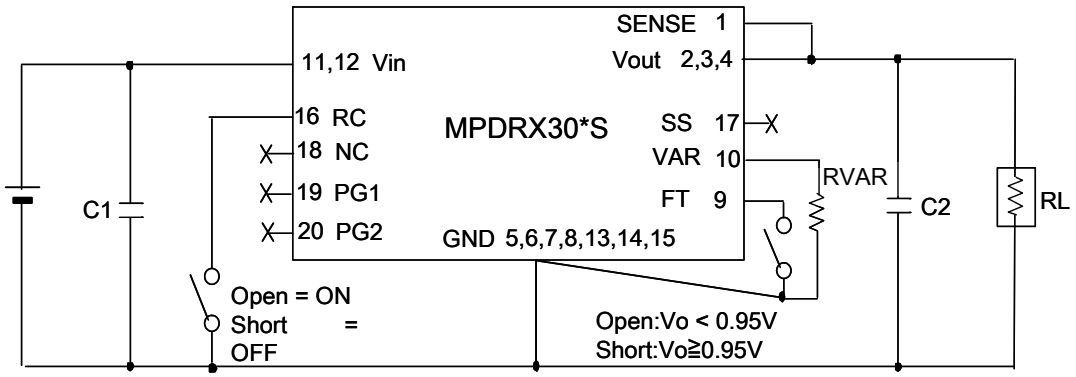
Pin No.	Symbol	Function
1	SENSE	Output Voltage sense
2,3,4	Vout	Output
5,6,7,81 3, 14,15	GND	GND
9	FT	Output Trim
10	VAR	Vout Adjustment
11,12	Vin	Input
17	SS	Soft Start
18	N.C.	Non Connection
19	POW-GOOD1	Power Good
20	POW-GOOD2	Power Good
16	RC	Remote ON/OFF

( )…reference value
P=2.54 ±0.2mm
Tolerance is not accumulated.

⚠ **Note:**

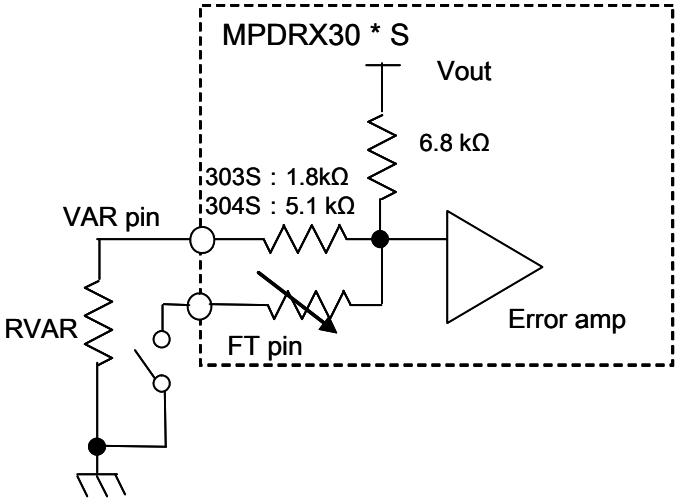
1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it' s specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

■ TEST CIRCUIT



C1 : 10μF / 25V×4 (Ceramic Capacitor)
C2 : 100μF / 6.3V×2 (Ceramic Capacitor)
※Please make sure to place C1 and C2 nearby input and output terminal of DC-DC converter.

■ OUTPUT VOLTAGE ADJUSTMENT



①MPDRX303S (FT-pin : SHORT to GND)

$$RVAR = \frac{5440}{Voadj[V]\times 1.002 - 1.5[V]} - 1800 \quad [\Omega]$$

②MPDRX304S

(a)0.8≦ Vout < 0.95V (FT-pin : OPEN)

$$RVAR = \frac{5440}{Voadj[V]\times 1.002 - 0.8[V]} - 5100 \quad [\Omega]$$

(b)0.95≦ Vout ≦1.65V (FT-pin : SHORT to GND)

$$RVAR = \frac{5440}{Voadj[V]\times 1.002 - 0.95[V]} - 5100 \quad [\Omega]$$

①MPDRX303S

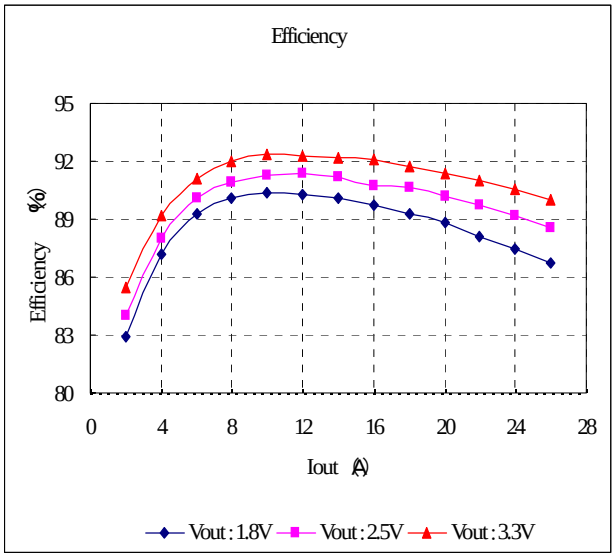
Voadj [V]	Calculated RVAR[Ω]	FT pin (8pin)
3.63	745	Short to GND
3.3	1211	Short to GND
2.5	3613	Short to GND
1.8	16118	Short to GND
1.6	50913	Short to GND

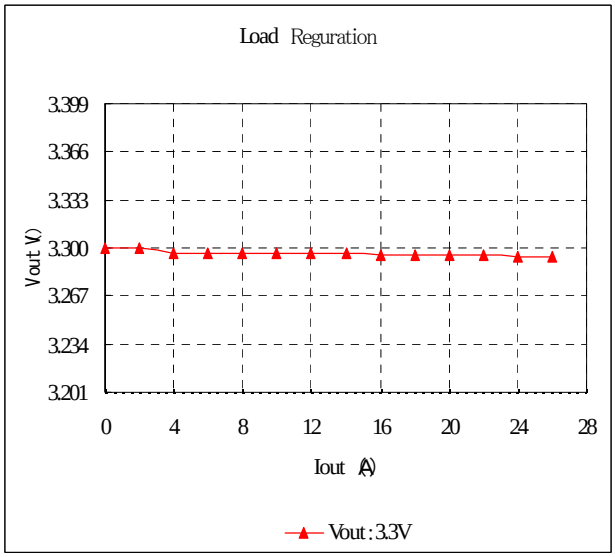
②MPDRX304S

Voadj [V]	Calculated RVAR[Ω]	FT pin (8pin)
1.65	2635	Short to GND
1.5	4737	Short to GND
1.2	16453	Short to GND
1.0	99515	Short to GND
0.95	2858058	Short to GND
0.9	48338	Open
0.8	3394900	Open

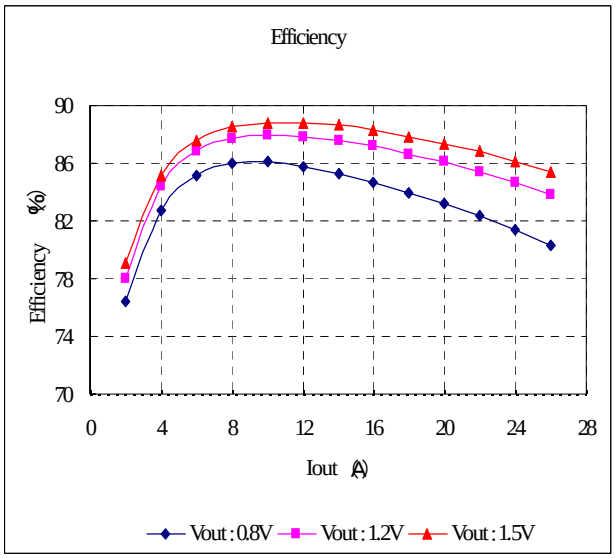
■EFFICIENCY AND REGURATION CHARACTERISTICS

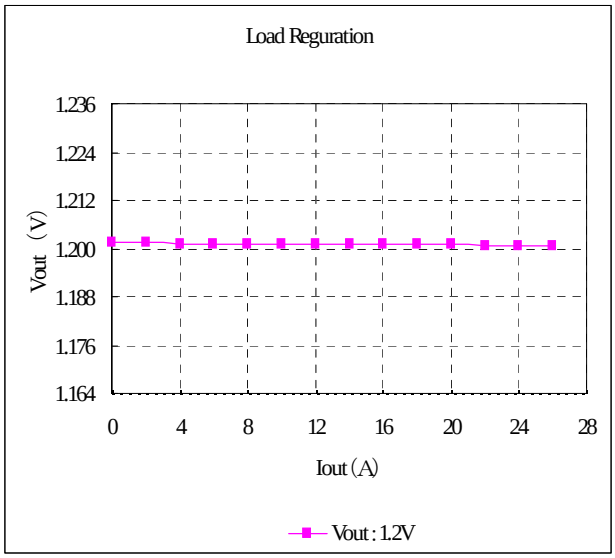
①MPDRX303S





②MPDRX304S



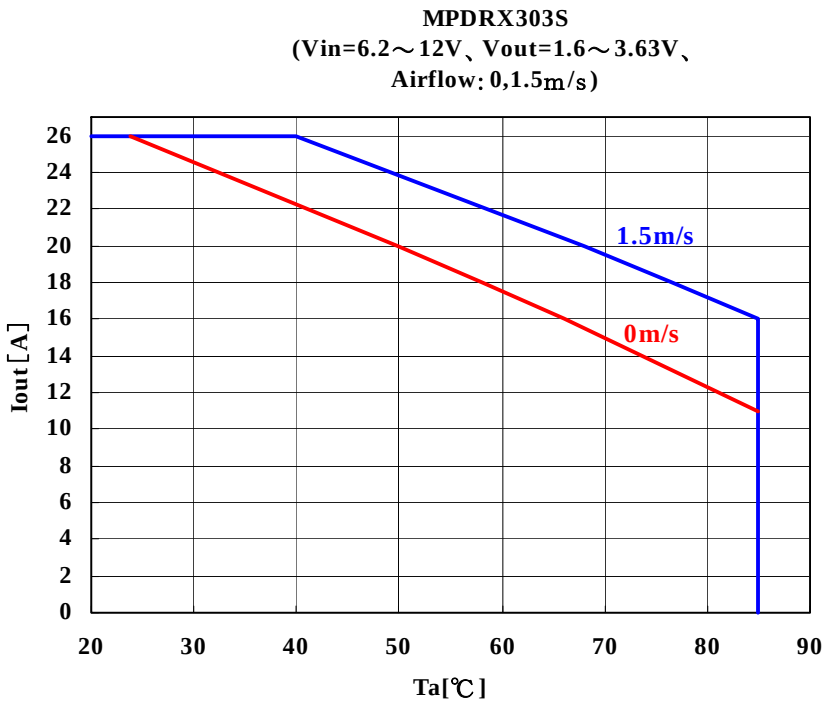


⚠ Note:

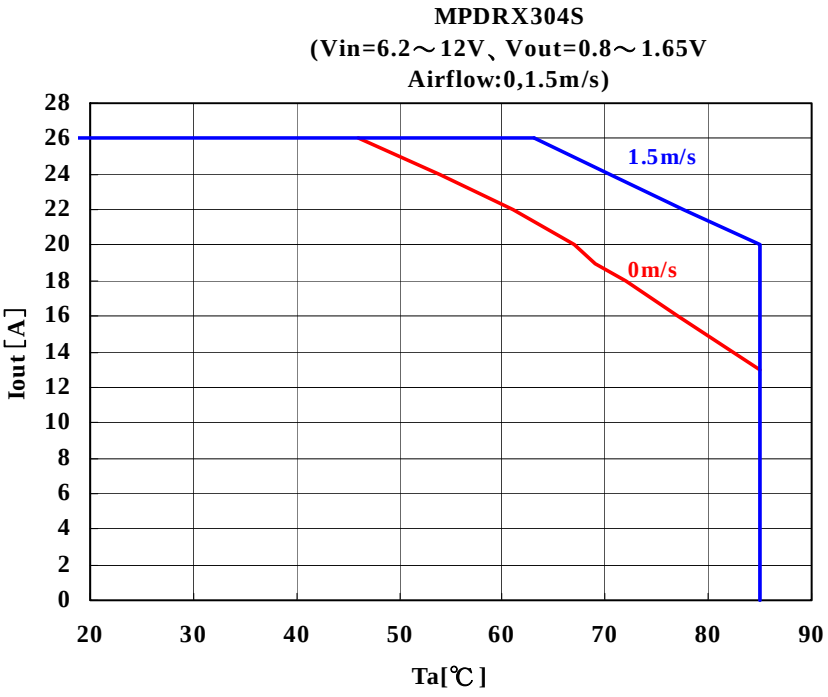
1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it' s specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

■THERMAL DERATING

①MPDRX303S



②MPDRX304S



⚠ **Note:**

1. This datasheet is downloaded from the website of Murata Manufacturing co., ltd. Therefore, it' s specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.