



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**BRUSHLESS DC FANS**

# F251RF

**FEATURES**

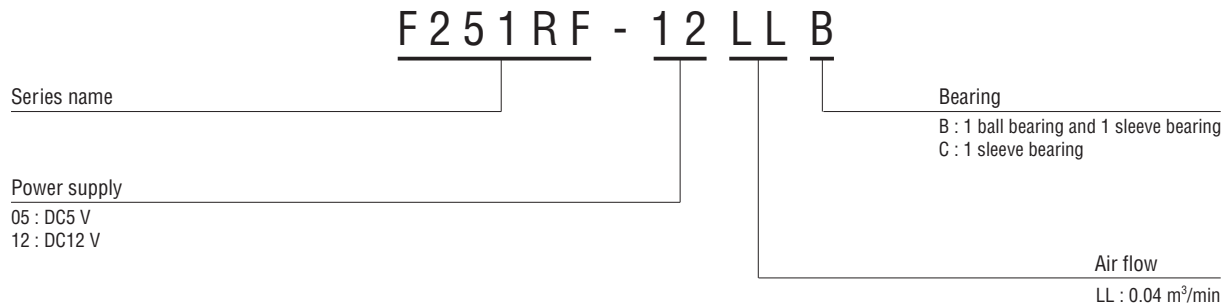
- FG signal type
- Low noise, 11 dB (A) type by the correct application of hydrodynamic design of impeller and frame
- Light weight (approx. 7 g)

**STRUCTURE**

- Frame and impeller  
ABS/PBT alloy
- Bearing  
B type : 1 ball bearing and 1 sleeve bearing  
C type : 1 sleeve bearing



**PART NUMBER DESIGNATION**



**LIST OF PART NUMBERS**

Power supply	Part number
DC5 V	F251RF-05LLB
DC12 V	F251RF-12LLB
	F251RF-12LLC

\* : Verify the above part numbers when placing orders.

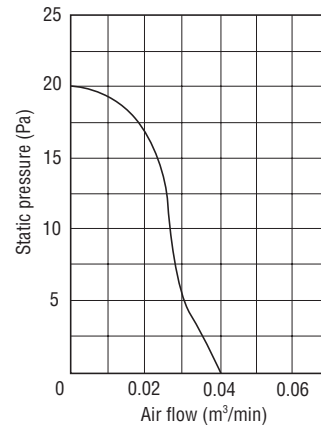
# F251RF BRUSHLESS DC FANS

## STANDARD SPECIFICATIONS

Item	F251RF-05LLB	F251RF-12LLB	F251RF-12LLC
Rated voltage	DC5 V	DC12 V	DC12 V
Voltage range	4.2 ~ 5.7 V	10.2 ~ 13.8 V	
Rated current	0.05 A	0.03 A	
Rotating speed	6500 min <sup>-1</sup>		
Air flow	0.04 m <sup>3</sup> /min		
Static pressure	20 Pa		
Noise	11 dB (A)		
Net weight	Approx. 7 g		

\* : Figures in the table are typical values under rated operating condition.

## AIR FLOW PERFORMANCE CURVES

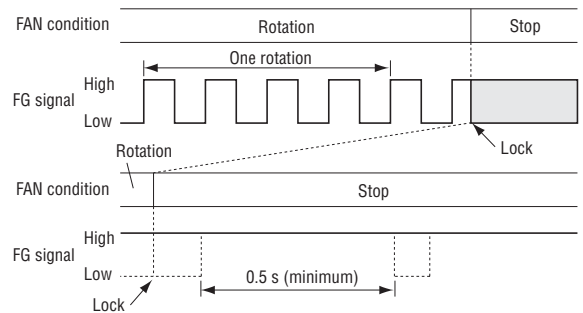


## FG SIGNAL CHARACTERISTICS

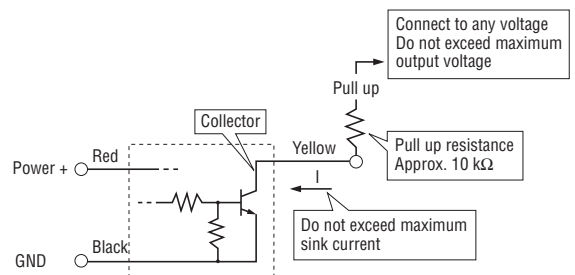
Item	Specification
Output circuit	Open collector
Maximum output voltage	15 V
Maximum sink current	5 mA
Output saturation voltage (at Low)	V <sub>sat</sub> : Maximum 0.4 V
Output (rotate)	4 pulses / rotation
Output (lock)	High or High/Low intermittent motion *
Time a High Signal (lock)	0.5 s minimum

\* : 2 conditions are possible according to the stop position of the impeller.  
 ① "High" (Fixed) : Constantly "High"  
 ② "High/Low" intermittent motion : "High" and "Low" switch at regular time intervals.  
 It is guaranteed that "high" continues over 0.5 seconds.

## FAN condition and FG signal

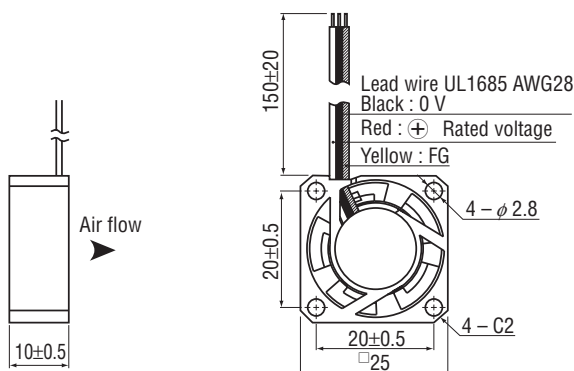


## Output circuitry



## OUTLINE DIMENSIONS

(Unit: mm)



Dimension of mounting hole for recommendation

