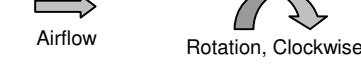
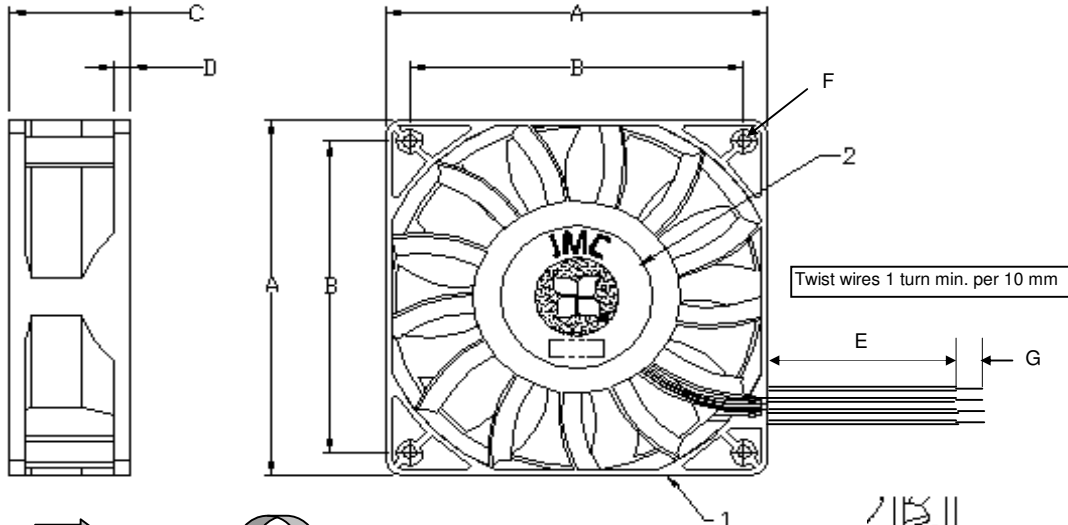
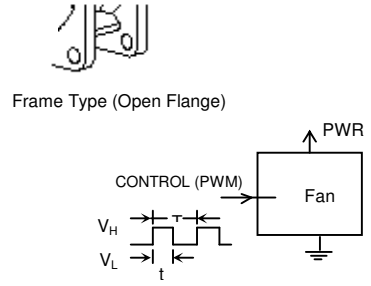


NOT RELEASED FOR PRODUCTION

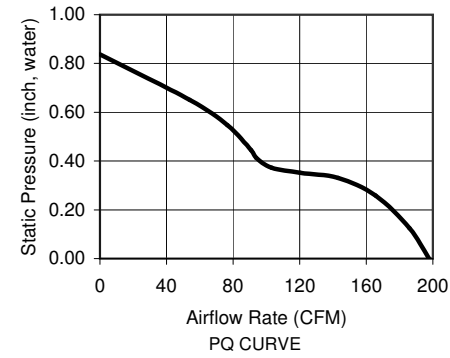


WIRE DESIGNATION	
WIRE COLOR	FUNCTION
Black	GND (-)
Yellow	PWR (+)
Green	TACH
Blue	PWM

All Dimensions in mm	
A	120 +/-0.5
B	105 +/-0.4
C	38.0 +/-0.2 / -1.0
D	5.0 +/- 0.3
E	300 +/- 30
F	8 X 4.5 +/- 0.3
G	6.4 +/- 1.0

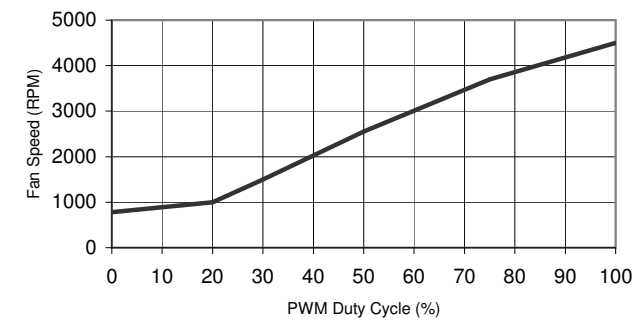


DUTY CYCLE = $t/T \times 100\%$
 PWM Fcy: 25KHz +/-5KHz
 PWM_High V_H: 2.8V - 5.5V
 PWM_Low V_L: 0V - 0.8V
 PWM Pin Open: Full Speed
 FRONT END PWM CIRCUIT

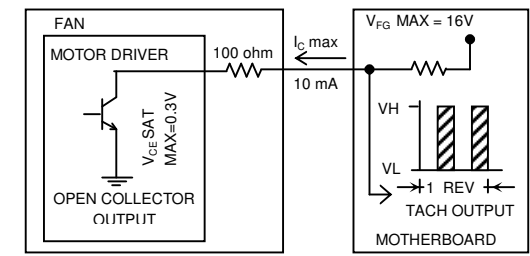


Revision History				
EC No	REV	Date	Description	Approvals
NA	X00	6/7/08	Created Dwg.	SA
NA	X01	10/11/11	Updt. PWM Curve	JE
NA	X02	10/23/14	Updt. CFM, STP, dBA	JE

- NOTES**
- THIS FAN AND ALL OF ITS COMPONENTS COMPLY WITH THE REQUIREMENTS OF RoHS DIRECTIVE 2011/65/EU
 - BASE MODEL FAN - ANY CHANGES TO SPECIFICATION REQUIRES NEW PART NUMBER AND DRAWING.
 - RPM TOLERANCE IS +/-30% AT DUTY CYCLES BELOW 30%. AT DUTY CYCLES BETWEEN 30% AND 100%, RPM TOLERANCE CONVERGES LINEARLY TO 10%.



PWM DUTY CYCLE vs. FAN SPEED AT 12V



TACH OUTPUT ELECTRICAL CHARACTERISTICS

	ITEM	SPECIFICATION	UNITS / NOTES
MECHANICAL	Speed	4500 +/- 10%	RPM at 12 Vdc
	Airflow	197.7	CFM in Free Air
	Static Pressure	0.84	Inch, H ₂ O
	Bearing Type	Ball, Dual	N/A
	Operating Temp	(-)10 to 70	Deg C
	Storage Temp	(-) 40 to 70	Deg C
	Noise Level	63.0	dBA Max at 1M
	Blade Material	UL 94V-0	N/A
	Frame Material	UL 94V-0	N/A
	Wire Size	22	AWG
PHYSICAL	Wire Type	UL 1007	N/A
	Wire Assembly	First Slot	N/A
	Regulatory Approvals	UL CUL TUV	N/A
	Net Weight	TBD	Grams
ELECTRICAL	Operating Voltage	10.8 - 13.2	Vdc
	Start up Voltage	NA	Vdc
	Start up PWM duty cycle	30	%
	Rated Current	2.60 (3.0 Max)	Amp
	Input Power	31.2 (36.0 Max)	Watts
	Tach Output	2	Pulses/Rev
	Polarity Protection	Yes	N/A
	Motor Protection	Yes	Type 2

2	1	Logo Label	L12003B0004	JMC
1	1	Fan Model	1238 - 12	JMC
Item	Qty	Description	Part Number	MFG

Austin Texas, USA Dong Guan, PRC	<p>The Fan Company</p>	Fan, 120 x 38 FV, 12Vdc, PWM, Dual Ball, Base Model	
Drawn By S. Apsangi		Size A1	Drawing Number 12003B0004
Engineer J. Elmo	Scale: None		Sheet 1 of 1

PROPRIETARY NOTE

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