

**BL2250DS****Report for Brushless Motor Testing Data Sheet****Series No: BL2250- - IE - - P 4**

No.	Testing Item		Tested Values				Unit
1	Nominal voltage	U_N	12	18			V
2	Terminal resistance, phase to phase	R	13.54	13.54			Ω
3	Output power	P_{2max}	2.42	5.54			W
4	Efficiency	η_{max}	62	65			%
5	No-load speed	n_o	9490	13870			rpm
6	No-load current	I_o	0.04	0.05			A
7	Stall torque	M_H	9.76	15.26			mNm
8	Friction torque	MF	0.46	0.60			mNm
9	Speed constant	k_n	828.21	800.67			rpm/V
10	Back-EMF constant	k_E	1.21	1.25			mV/rpm
11	Torque constant	k_M	11.53	11.93			mNm/A
12	Current constant	k_I	0.09	0.08			A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$	972.59	908.98			rpm/mNm
14	Mechanical time constant	τ_m	19.25	17.99			ms
15	Rotor inertia	J	1.89	1.89			gcm ²
16	Angular acceleration	α_{max}	51.63	80.73			10 ³ rad/s ²
17	Sensor		Sensorless				
18	Driver		DR1802				
19	Weight		55				g
20	Operating temperature range		-30~+85				
21	Commutation		Electronically commutation				
22	Ball Bearing		EZO & NMB				
23	Housing material		Aluminum, black anodized				
24	Magnet material		Sr. Ferrimagnet				
25	Direction of rotation		Electronically reversible				
The Operating Data For η_{max} of Customer's Specifications							
26	Output Power	P_{2opt}	1.37	2.96			W
27	Efficiency	η_{opt}	62	65			%
28	Speed	n_{opt}	6167	9369			rpm
29	Load Current	I_{opt}	0.18	0.25			A
30	Operating Torque	M_{opt}	2.12	3.02			mNm

Note:

- (1) The I_o is pure current of motor in this data sheet that means it not included the driver's current..
- (2) This type of motor can be assemble for planetary Gearbox which type of IG22 and made from Shayang Ye Co., Taiwan, and please to see Gearbox' s sheet attached if you have need it.

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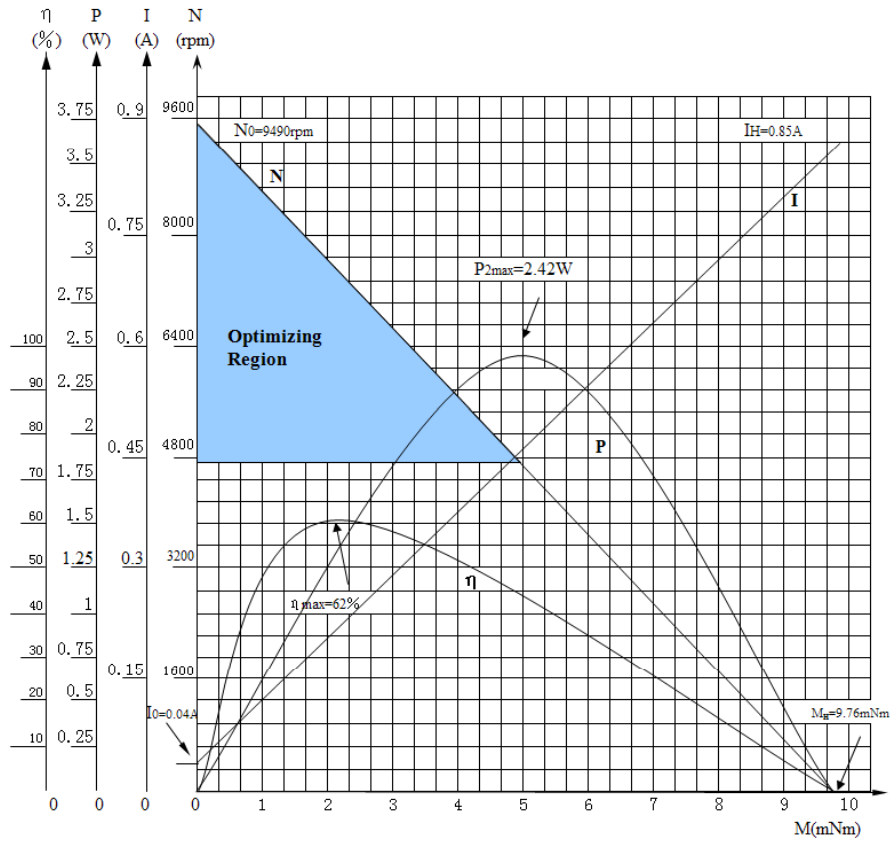
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Operating Curve



Note:(1)The I_0 is pure current of motor in this curve drawing that means it not included the driver's current.

(2)We have suggested there has a optimizing region for this motor's operating as hatched in drawing.

Drawing

