



Electrical Data	****	122A	216E	210E	208E	207E		
1 Nominal Voltage	V	2	6	12	18	24	Volt	
2 No-Load Speed	$n_0$	7,000	8,480	8,460	8,460	8,900	rpm	
3 No-Load Current	$I_0$	60.0	16.0	7.7	4.9	3.5	mA	
4 Terminal Resistance	R	0.7	3.2	17.3	38.4	65.0	$\Omega$	
5 Output Power	$P_{2max}$	3.0	3.6	3.1	3.2	3.1	W	
6 Stall Torque	mNm	7.6 (1.08)	12.5 (1.78)	9.3 (1.32)	9.4 (1.34)	9.4 (1.34)	mNm (oz-in)	
7 Efficiency	$\eta_{max}$	73	82	80	81	81	%	
8 Max continuous speed	$n_{e max.}$	10,000	10,000	10,000	10,000	10,000	rpm	
9 Max continuous torque	$M_{e max.}$	4.8 (0.81)	5.7 (0.81)	4.8 (0.68)	4.9 (0.7)	4.8 (0.68)	mNm (oz-in)	
10 Max continuous current	$I_{e max.}$	1.84	0.86	0.37	0.25	0.19	A	
11 Back-EMF Constant	$k_E$	0.28	0.70	1.40	2.10	2.67	mV/rpm	
12 Torque Constant	$k_M$	2.67	6.70	13.40	20.10	25.50	mNm/A	
13 Motor Regulation	$R/k^2$	98.2	71.3	96.3	95.05	99.96	$10^3/Nms$	
14 Friction Torque	$T_F$	0.16 (0.03)	0.1 (0.02)	0.1 (0.02)	0.1 (0.02)	0.09 (0.02)	mNm (oz-in)	
15 Rotor Inductance	L	0.10	0.11	0.40	0.90	1.41	mH	
16 Mechanical Time Constant	$\tau_m$	6.9	7.8	7.7	7.2	7.2	ms	
17 Rotor Inertia	J	0.70	1.10	0.80	0.76	0.72	g.cm <sup>2</sup>	
18 Thermal Resistance (rotor/body)	$R_{th1} / R_{th2}$	10 / 30	10 / 30	10 / 30	10 / 30	10 / 30	$^{\circ}C/W$	
19 Thermal Time Constant (rotor/stator)	$\tau_{w1}/\tau_{w2}$	7 / 400	7 / 400	7 / 400	7 / 400	7 / 400	$^{\circ}C/W$	
20 Operating Temperature Range:	motor	-30°C to 85°C (-22°F to 185°F)						$^{\circ}C$ ( $^{\circ}F$ )
	rotor	100°C (212°F)						$^{\circ}C$ ( $^{\circ}F$ )
21 Shaft Load max.:		With sleeve bearings						
(5mm from bearing)	-radial	1.5 (5.4)						N (oz)
	-axial	100 (359.6)						N (oz)
22 Shaft play:	-radial	<0.03 (0.0012)						mm (inch)
	-axial	0.15 (0.0059)						mm (inch)
23 Weight	g	27 (0.96)						g (oz)

Execution			
Gearbox	Single Shaft	F16	MR2
B16	5	5	Contact Us
BA16	5	5	Contact Us
R16	1	1	96

