

IRONCORE LINEAR MOTOR

LMA22-050

PERFORMANCE		Winding codes	3TA	3TB
		UNIT	FREE AIR CONVECTION	FREE AIR CONVECTION
Fp	Peak force	N	1830	1830
Fc	Continuous force	N	528	528
Fs	Stall force	N	401	401
Kt	Force constant	N/Arms	150	75.1
Ku	Back EMF constant (*)	Vrms/(m/s)	86.8	43.4
Km	Motor constant	N/√W	46.1	46.1
R20	Electrical resistance at 20°C (*)	Ohm	7.06	1.77
L1	Electrical inductance (*)	mH	80.3	20.1
Ip	Peak current	Arms	20.2	40.5
Ic	Continuous current	Arms	3.65	7.29
Is	Stall current	Arms	2.76	5.52
Pc	Max. continuous power dissipation	W	202	202

SPECIFICATIONS		UNIT		
Udc	Nominal input voltage	VDC	600	600
τth	Thermal time constant	s	1600	1600
Rth	Thermal resistance	K/W	0.546	0.546
2τp	Magnetic period	mm	32	32
Mw	Magnetic way mass	kg/m	6.34	6.34
Mm	Motor mass (magnetic way excluded)	kg	6.35	6.35
Fa	Attraction force	N	3900	3900
Fd	Max. detent force (average to peak)	N	14	14
vs	Stall speed	mm/s	0.20	0.20
Gm	Mechanical gap	mm	0.80	0.80

Notes: (*) terminal to terminal. Ambient temperature = 20 °C. Max. coil temperature = 130 °C.
 Hypothesis and tolerances are in ETEL's Handbook. Carriage's dissipation area is 0.12 m² and minimal stroke is 2 times the motor length.
 Caution: Any use of the motor beyond speed/force limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

