

电动机规格书(暂定)
MOTOR SPECIFICATION(TENTATIVE)

电动机型号 MOTOR MODEL: SS136C0030

1、适用范围 SCOPE

本规格书概括了混合式步进电动机SST36C0030的基本要求
THIS SPECIFICATION COVERS THE GENERAL REQUIREMENTS FOR THE STEP MOTOR SST36C0030 THAT CONSISTS OF BIPOLAR WINDING STATOR AND HYBRID MAGNET ROTOR

2、电气特性 ELECTRICAL CHARACTERISTICS

项目/ITEM	内容/SPECIFICATION	备注/DESCRIPTION
额定工作状态/DUTY	连续/CONTINUOUS	
额定电压/RATED VOLTAGE	5.0 V D.C	
额定电流/RATED CURRENT	0.3 A/相(PHASE)	
步进角/STEP ANGLE	0.9° (DEG) 全步/FULL STEP	
相数/NUMBER OF PHASE	2相 双极的 2相励磁/2PHASE BIPOLAR 2PHASE EXCITING	
绝缘等级(UL)/INSULATION CLASS(UL)	UL B级/CLASS(线圈/COIL)	
卷线电阻/WINDING RESISTANCE	16.8 Ω ±10%	25° C
卷线电感/WINDING INDUCTANCE	8.5mH ±20%	注释)1/(NOTE)1
保持力矩/HOLDING TORQUE	35.3mN·m(360gf·cm)以上/MIN.	注释)2/(NOTE)2
制动力矩/DETENT TORQUE	3.92mN·m(40gf·cm)中心值/NORMAL	
最大自启动频率/MAX STARTING PULSE RATE	2250PPS以上/MIN.	注释)4/(NOTE)4
静止角度误差/POSITIONAL ACCURACY	±0.045° (deg)以下/MAX.	注释)5/(NOTE)5
绝缘耐压/DIELECTRIC STRENGTH	500V A.C 1分钟/MINUTE 无异常/NO ABNORMAL	注释)6/(NOTE)6
绝缘电阻/INSULATION RESISTANCE	100 MΩ 以上/MIN.	注释)7/(NOTE)7
温度上升/TEMPERATURE RISE	80 K (80 DEG)以下/MAX.	注释)8/(NOTE)8

3、机械特性 MECHANICAL CHARACTERISTICS

项目/ITEM	内容/SPECIFICATION	备注/DESCRIPTION
机械尺寸/MECHANICAL DIMENSION	根据电动机规格书Y-05-0527-(3/3页)所示 ACCORDING TO SPECIFICATION Y-05-0527-(PAGE3/3)	
轴材料/SHAFT MATERIAL	SUS303	
轴承/BALL BEARING	单列滚珠轴承/SINGLE ROW BALL BEARING	
端盖材料/END BELL MATERIAL	铝合金/ADC12	
质量/MASS	50克/g	
转子惯量 ROTOR INERTIA	约7.3g·cm ² (7.43×10 ⁻³ g·cm·s ²) APPROXIMATELY 7.3g·cm ² (7.43×10 ⁻³ g·cm·s ²)	

4、其他 ADDITIONAL

项目/ITEM	内容/SPECIFICATION	备注/DESCRIPTION
转动方向/DIRECTION OF ROTATION	按照表1的励磁顺序从安装面看顺时针方向 PHASE SEQUENCE TO PRODUCE CLOCKWISE ROTATION VIEWED FROM MOUNTING END IS AS TABLE 1	
电机引线型号/TYPE OF LEAD WIRE	UL1061 CSA AWM AWG28	
电机引线颜色/COLOR OF LEAD WIRE	按照表2所示/ACCORDING TO TABLE 2	
寿命/LIFE	5000小时以上/HOURS MIN	注释)9/(NOTE)9
电气用品安全标准/ELECTRICAL APPLIANCE SAFETY STANDARD	日本电气用品安全法/ELECTRICAL APPLIANCE AND MATERIAL SAFETY LAW OF JAPAN	

项目/ITEM	内容/SPECIFICATION	备注/DESCRIPTION
使用温度范围 OPERATION AMBIENT TEMPERATURE	0°C ~ +50°C	
使用湿度范围 OPERATION AMBIENT HUMIDITY	20%RH ~ 90%RH	注释)10/(NOTE)10
保存温度范围 STORAGE AMBIENT TEMPERATURE	-20°C ~ +70°C	
使用湿度范围 STORAGE AMBIENT HUMIDITY	20%RH ~ 95%RH	注释)10/(NOTE)10

**使用时的注意事项
CAUTION AND RECOMMENDATION**

不可拎着电动机引线拿取电动机
PLEASE DON'T HOLD MOTOR BY LEAD WIRES

通电状态下不可插拔电动机插头
PLEASE DON'T PLUG OR UNPLUG THE MOTOR CONNECTOR WHILE POWER ON

请不要使电动机落地以及碰撞电动机
如有此类情况发生 即使当时电动机可以使用 但质量将不能得到保证
PLEASE DON'T DROP HURL AND DUMP MOTOR AGAINST HARD MATERIAL. MALFUNCTION MAY NOT BE OBSERVED AT EARLY STAGE AFTER SUCH SHOCK BUT IT MAY BE FOUND LATER THIS TYPE OF MISHANDLING VOIDS OUR WARRANTY

请顾客方对电动机在实际装配的状态进行确认 验证实际使用时的适用性
THE FUNCTION OR PERFORMANCE SHALL BE EVALUATED BY INSTALLING MOTOR TO APPLICATION THAT SHOULD BE CHECKED AT BUYER'S SIDE

电动机分解后不可再组装使用
PLEASE DON'T REUSE DISASSEMBLED MOTOR

在电动机的使用上 若产生有关专利问题 本公司不予保证 请贵公司特别注意
OUR CORPORATION WILL NOT BE RESPONSIBLE FOR ANY PATENT DISPUTE OR PROBLEM CAUSED BY ACTUAL APPLICATIONS

材质 MATERIAL					SST36C0030	
表面处理 FINISH	00	05-07-08	00初版	张剑波	备注 NOTE	
制图 DRAWN	设计 DESIGNED	检图 CHECKED	检印 CHECKED	比例 SCALE	品名 TITLE	电动机规格书(暂定) MOTOR SPECIFICATION(TENTATIVE)
05-07-08	05-07-08	张剑波	张剑波		图号 DWG. NO.	Y-05-0527-0
东莞信添与达有限公司 DONGGUAN SHITANG MOTOR CO., LTD						1/3

A
B
C
D
E

SKY

1. 注释 NOTE

1.	在1kHz 1Vrms 条件下测定 MEASURED AT 1kHz 1Vrms
2.	在额定电流 2相励磁条件下进行测定 MEASURED AT RATED CURRENT AND 2PHASE EXCITING
3.	负载转动惯量 $3g \cdot cm^2 (3.06 \times 10^{-3} g \cdot cm \cdot s^2)$ LOAD INERTIA $3g \cdot cm^2 (3.06 \times 10^{-3} g \cdot cm \cdot s^2)$
4.	在无负载条件下测定 MEASURED AT NO LOAD
5.	不包括磁滞误差 2相励磁 EXCLUDING HYSTERESIS 2PHASE EXCITING
6.	在电机引线与铁芯间加50或60Hz交流电压1分钟无异常 并且泄漏电流在3mA以下 THERE SHOULD BE NO BREAK DOWN AT 50Hz&60Hz APPLIED FOR 1MINUTE BETWEEN MOTOR FRAME AND LEAD WIRES AND THE CUI PF CURRENT IS 3mA MAX
7.	在电机引线与铁芯间加500V D.C电压 APPLY 500V D.C BETWEEN MOTOR FRAME AND LEAD WIRES
8.	卷线两端加5.0V D.C Opps 2相励磁的条件下使用电阻法来测定 MEASURED BY RESISTANCE METHOD WHEN TWO WINDINGS ARE EXCITED BY 5.0V D.C OPPOS
9.	使用图1所示的电路 2相励磁 I=0.3A/相(峰值) 2250pps 并且轴承温度低于70° 条件下进行寿命试验后 在使用温度, 湿度条件下 能满足项目2的电气特性 WITH TEST CIRCUIT OF FIG.1 2PHASE EXCITING I=0.3A/PHASE AT 2250PPS WHILE TEMPERATURE AT BALL BEARING SHOULD BE +70° MAX. TO DO LIFE TEST AFTER LIFE TEST IT SHOULD CONFORMS THE ELECTRICAL SPECIFICATION UNDER OPERATION AMBIENT
10.	表面应无结霜 NO CONDENSATION

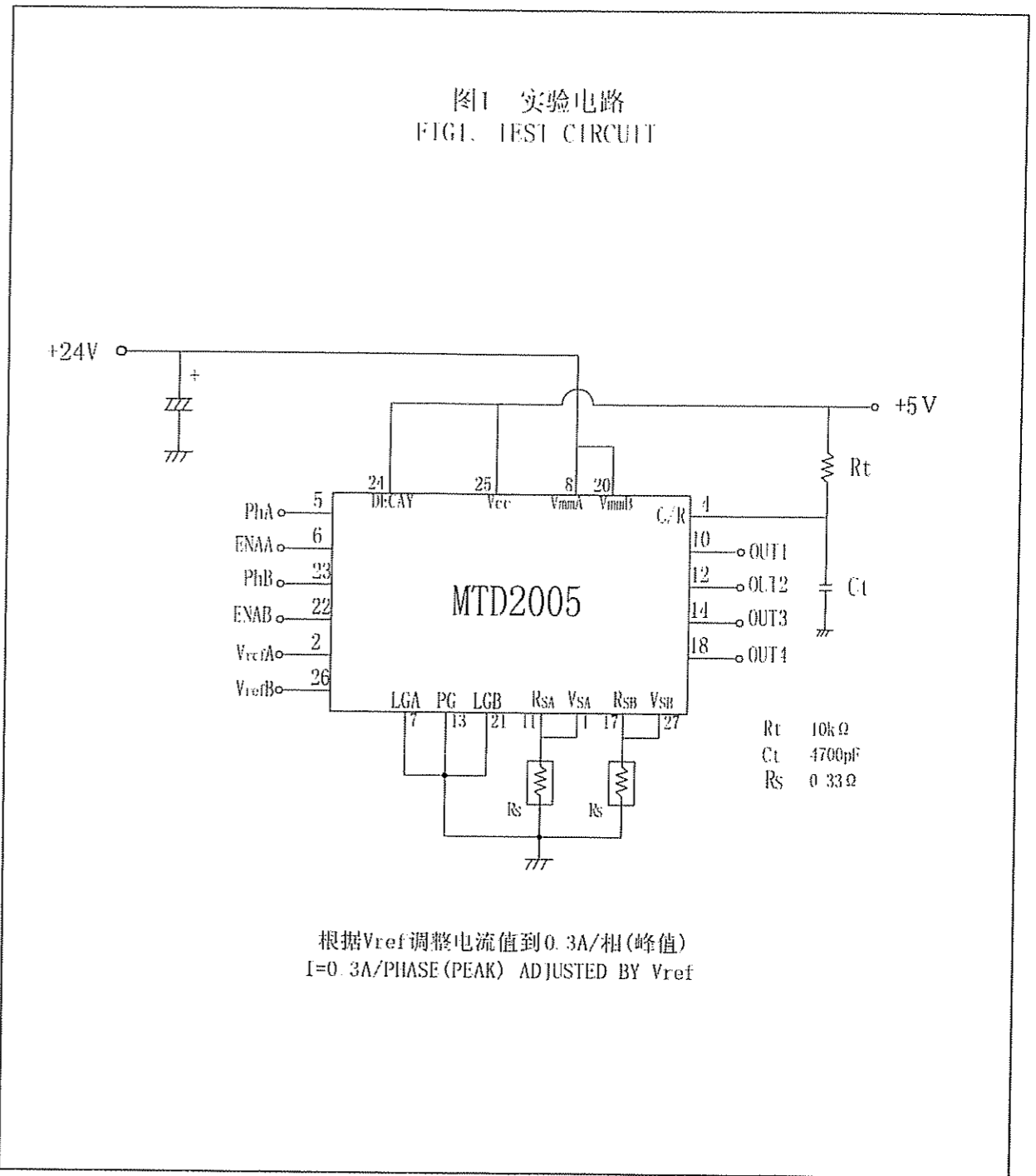
【表1】 励磁顺序
【TABLE1】 PHASE SEQUENCE

STEP	A	B	\bar{A}	\bar{B}
1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
4	+	-	-	+
5	+	+	-	-

【表2】 电机引线颜色
【TABLE2】 COLOR OF LEAD WIRES

相 PHASE	A	B	\bar{A}	\bar{B}
颜色 COLOR	棕 BROWN	红 RED	橙 ORANGE	黄 YELLOW

图1 实验电路
FIG1. TEST CIRCUIT



根据Vref调整电流值到0.3A/相(峰值)
I=0.3A/PHASE (PEAK) ADJUSTED BY Vref

材质 MATERIAL								SST36C0030	
表面处理 FINISH		00	05-07-08	00初版		张剑波		备注 NOTE	
制图 DRAWN	设计 DESIGNED	检图 CHECKED	检印 CHECKED	比例 SCALE	品名 TITLE	电动机规格书(暂定) MOTOR SPECIFICATION (TENTATIVE)		第三角 THIRD ANGLE PROJECTION	
张剑波	张剑波	张剑波	张剑波		图号 DWG. NO.	Y-05-0527-0			
东莞信浓电机有限公司 DONGGUAN SHINANO MOTOR CO., LTD.								页 SUBJ	2/3

TEST DATA SHEET

MODEL: SST36C0030

LOT NO.: 11750G

DATE: 9-Jul-05

张剑波

SUBJECT: ELECTRICAL CHARACTERISTICS

CUSTOMER: SKJ

INSPECTED BY:

TEST CONDITION: ACCORDING TO MOTOR SPECIFICATION

CHECKED BY:

CIRCUIT: MTD2005

APPROVED BY:

SPEC. NO. Y-05-0527-0

张剑波

ITEM	TEST DATA																SPEC	NOTE
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13	No.14	UNIT			
WINDING PHASE ϕ 1	16.7	16.8	16.7	16.4	16.3	15.6	16.5	16.2	16.8	17.0	16.0	16.9	17.0	17.1	Ω	16.8 \pm 10%	AT 25 °C	
RESISTANCE ϕ 2	16.8	17.0	16.7	16.7	16.4	15.9	16.6	16.6	17.0	16.9	16.0	16.8	16.9	17.0	Ω			
WINDING PHASE ϕ 1	8.34	8.43	8.61	8.39	8.59	8.50	8.39	8.49	8.47	8.29	8.41	8.37	8.46	8.40	mH	8.5 \pm 20%	1kHz 1V rms.	
INDUCTANCE ϕ 2	8.36	8.42	8.60	8.40	8.49	8.50	8.38	8.48	8.49	8.38	8.33	8.33	8.44	8.38	mH			
DEFENT TORQUE	38	36	30	42	34	36	32	36	36	36	38	40	42	38	gf*cm	40NOMINAL	NO LOAD	
	3.73	3.53	2.94	4.12	3.33	3.53	3.14	3.53	3.53	3.53	3.73	3.92	4.12	3.73	mN*m			
HOLDING TORQUE	430	420	440	430	420	450	420	420	440	430	440	430	450	450	gf*cm	360MIN		
	42.2	41.2	43.2	42.2	41.2	44.1	41.2	41.2	43.2	42.2	43.2	42.2	44.1	44.1	mN*m			
MAX. STARTING PULSE RATE	2600	2610	2600	2620	2610	2630	2620	2610	2610	2610	2610	2610	2600	2590	PPS	2250 MIN	AT NO LOAD	
POSITIONAL ACCURACY	0.016	0.023	0.020	0.025	0.023	0.018	0.016	0.023	0.014	0.016	0.025	0.029	0.025	0.018	\pm °	\pm 0.045 deg MAX	EXCLUDING HYSTERESIS	

ITEMS WITH * MARK ARE REQUIRED SPECIFICATION BY CUSTOMER

COMMENT

MODEL : SST36C0030
 L/N : 11750G
 SPEC. No. : Y-05-0527-0

FREQUENCY VS TORQUE CURVE

DATE : 7/8/2005

TEST CONDITIONS					
VOLTAGE	24V. D. C	<input type="radio"/>	SUPPLY	<input type="checkbox"/>	WINDING
CURRENT	0.30A/PHASE	<input type="checkbox"/>	PEAK	<input type="checkbox"/>	AVE
EXCITATION	2PHASE EXCITING				
DRIVE CIRCUIT	MTD2005		UNIPOLAR	<input type="checkbox"/>	BIPOLAR
INERTIA LOAD	3g-Cm2				

