



No.	QC-WI-005	VER	A/0	Page	Page 1 of 2
File Name	Spec of Nanocrystalline core			Effective Date	2015.03.28

1.Applications

- Inverter welder power supply
- Communication power supply
- High-frequency induction heating power supply
- UPS power supply
- Laser power supply
- Electrolytic electroplating power supply




2.Performance feature

- High saturation magnetic induction----effectively reduce the volume of transformer
- High permeability,LoCo----improve the efficiency of transformer,reduce the magnetizing power and copper loss
- Low loss----decreasing the temperature rise of transformer
- Excellent temperature stability----it can work under the temperature of -55~130℃ for a long time

3.The difference between nanocrystalline cores and ferrite cores

Basic parameters	Nanocrystalline cores	Ferrite cores
Saturation magnetic induction Bs	1.25T	0.5
Residual magnetic sense Br(20KHz)	<0.20	0.2
Iron loss(20KHz/0.2T)(W/Kg)	<3.4	7.5
Iron loss(20KHz/0.5T)(W/Kg)	<30	—
Iron loss(50KHz/0.3T)(W/Kg)	<40	—
Magnetic permeability(20KHz)(Gs/Oe)	>20,000	2,000
Coercive forceHc(A/m)	<1.60	6
Saturation magnetostriction constant($\times 10^{-6}$)	<2	4
Resistivity ($\mu\Omega.cm$)	80	106
Curie temperature(℃)	560	<200
Lamination factor of iron core	>0.70	—

4.The spec of nanocrystalline cores

	No.	QC-WI-005		VER	A/0	Page	Page 2 of 2			
	File Name	Spec of Nanocrystalline core				Effective Date	2015.03.28			
	Spec	Dimension of iron core			Dimension of case			Effective section	MPL	MIN weight
	od(mm)	id (mm)	ht(mm)	OD (mm)	ID (mm)	HT (mm)	(cm ²)	(cm)	(g)	(A)
SAT-503220	50	32	20	53	28	23	1.35	12.8	125	120, 140, 160
SAT-644020	64	40	20	66	37	23	1.68	16.3	200	160, 180
SAT-704020	70	40	20	73	38	24	2.16	17.3	270	180, 200
SAT-704025	70	40	25	72	37	28	2.63	17.3	330	180, 200
SAT-755025 *	75	50	25	77	47	28	2.19	19.6	310	180, 200
SAT-805020	80	50	20	82	46	23	2.1	20.4	300	160, 180, 200
SAT-805 025	80	50	25	85	44	30	2.63	20.4	390	200, 250, 300
SAT-1006020	100	60	20	105	56	23	2.8	25.1	510	315, 350, 400
SAT-1056030	105	60	30	110	56	35	5.06	25.9	945	315, 350, 400
SAT-1206030	120	60	30	125	57	35	6.3	28.3	1280	400, 500, 630
SAT-1206040 *	120	60	40	125	57	45	8.4	28.3	1710	500, 630
SAT-1207020	120	70	20	125	67	25	3.5	29.8	750	350, 400, 500
SAT-1207025	120	70	25	125	67	30	4.38	29.8	940	315, 350, 400
SAT-1207030	120	70	30	125	67	35	5.25	29.8	1130	500, 630, 800
SAT-1207040 *	120	70	40	125	67	45	7	29.8	1500	500, 630, 800,
SAT-1308040	130	80	40	136	76	45	7	33	1660	500, 630, 800
SAT-17011050	170	110	5 0	176	104	56	10.5	43.96	3320	1000

5.Nanocrystalline cores Gen 2

Spec	Dimension of iron core			Dimension of case			Effective section	MPL	MIN weight
	od(mm)	id(mm)	ht(mm)	OD(mm)	ID (mm)	HT (mm)	(cm ²)	(cm)	(g)
SAT-503220	50	32	20	53	28	23	1.4	12.8	130
SAT-644020	64	40	20	66	37	23	1.87	16.3	220
SAT-704020	70	40	20	73	38	24	2.34	17.3	290
SAT-704025	70	40	25	72	37	28	2.81	17.3	350
SAT-805020	80	50	20	82	46	23	2.34	20.4	340
SAT-805025	80	50	25	85	44	30	2.81	20.4	410
SAT-1005025	100	50	25	105	44	30	4.69	23.5	795
SAT-1006020	100	60	20	105	56	23	3	25.1	540
SAT-1056030	105	60	30	110	56	35	5.06	25.9	945
SAT-1206030	120	60	30	125	57	35	6.75	28.3	1350
SAT-1207020	120	70	20	125	67	25	3.75	29.8	805
SAT-1207025	120	70	25	125	67	30	4.69	29.8	1005
SAT-1207030	120	70	30	125	67	35	5.62	29.8	1205
SAT-1308040	130	80	40	136	76	45	7.2	33	1700
SAT-1308050	130	80	50	136	76	55	9	33	2100