



MODEL : SDR-240-24

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25°C	V1: 9 mVp-p (Max)	P
2	PEAK POWER	V1:360W (>3sec.)	I/P: 230VAC O/P:360W Ta:25°C	Ok	P
3	OUTPUT VOLTAGE ADJUST RANGE	CH1: 24 V~ 28V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	23.29 V~ 28.61 V/ 230 VAC 23.29 V~ 28.61 V/ 115 VAC	P
4	OUTPUT VOLTAGE TOLERANCE	V1: 1 %~ -1 % (Max)	I/P: 100 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.05 %~ -0.05 %	P
5	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P: 100VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0 %~ 0 %	P
6	LOAD REGULATION	V1: 1 %~ -1 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.05 %~ -0.05 %	P
7	SET UP TIME	230VAC: 1500 ms (Max) 115 VAC: 3000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 868 ms 115VAC/ 1736 ms	P
8	RISE TIME	230VAC: 60 ms (Max) 115VAC: 60 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 35 ms 115VAC/ 29 ms	P
9	HOLD UP TIME	230VAC: 20 ms (TYP) 115VAC: 20 ms (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 34 ms 115 VAC 36 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 2400 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	468 mVp-p	P



INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	88VAC~264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	82 V ~264V	P
			I/P: LOW-LINE-3V= 85V HIGH-LINE+15%=300 V O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	TEST: OK	
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE OSC	I/P: 100 VAC ~ 264 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	POWER FACTOR	0.93 / 230 VAC(TYP) 0.99 / 115 VAC(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	PF= 0.947 / 230 VAC PF= 0.997 / 115 VAC	P
4	EFFICIENCY	94% (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	94.1 %	P
5	INPUT CURRENT	230V/ 1.3 A (TYP) 115V/ 2.6 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 1.17 A/ 230 VAC I = 2.29 A/ 115 VAC	P
6	INRUSH CURRENT	230V/ 65 A (TYP) 115V/ 33 A (TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 64.25 A/ 230 VAC I = 32.3 A/ 115 VAC	P
7	LEAKAGE CURRENT	< 1 mA / 240 VAC	I/P: 264 VAC O/P:Min LOAD Ta:25°C	L-FG: 0.72 mA N-FG: 0.72 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110%~ 150 % Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery >150% rated power, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	121 %/ 230 VAC 120 %/ 115 VAC Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery >150% rated power, constant current limiting with auto-recovery within 2 seconds and may cause to shut down if over 2 seconds	P
2	OVER VOLTAGE PROTECTION	CH1: 29 V~ 33V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	30.09 V/ 230 VAC 30.1 V/ 115 VAC Shut down o/p voltage with auto-recovery	P
3	OVER TEMPERATURE PROTECTION	SPEC: TSW1: 95 ± 5°C O.T.P. NO DAMAGE	I/P: 230 VAC O/P:FULL LOAD	O.T.P. Active Shut down o/p voltage · recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P:FULL LOAD Ta:25°C	NO DAMAGE Shut down Re-power ON	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load	I/P: 230 VAC O/P:FULL LOAD	OK	P

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min I/P-FG: 1.5 KVAC/min O/P-FG: 0.5 KVAC/min O/P-DC OK:0.5KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG: 0.6 KVAC/min O/P-DC OK: 0.6 KVAC/min Ta:25°C	I/P-O/P: 6.07 mA I/P-FG: 4.62 mA O/P-FG: 21.71 mA O/P-DC OK: 0.032 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C /70%RH	I/P-O/P: 2.54 GΩ I/P-FG: 1.86 GΩ O/P-FG: 23.2 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C / 70%RH	25 mΩ	P
4	APPROVAL	TUV: Certificate NO : R50136177 UL: File NO : E215312			P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A CLASS D	I/P: 230/240/220 VAC/50HZ O/P:100/75/50/25%LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SDR-240-24:SUPPOSE C 105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 261285 HRS I/P: 230VAC O/P:FULL LOAD Ta= 60 °C LIFE TIME= 22614 HRS I/P: 230VAC O/P:75%OAD Ta= 60 °C LIFE TIME= 43752 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 169.3K HRS			P
3	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure : Above 30,000 hours @ TA 60°C			P



COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q 5 Rated STF25NM50N 22A/550V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Output Short Ta:25°C	(1) 498 V (2) 452 V	P
2	Diode Peak Voltage	Q100 Rated IRFB3307 130A/75V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25°C	(1) 64.4 V (2) 10 V	P
3	PFC Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated STP21NM60N 17A/600V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short Ta:25°C	(1) 595 V (2) 478 V	P
4	Input Capacitor Voltage	C5 Rated 220u/450V 105°C HU	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 424 V (2) 418 V (3) 424 V	P
5	Control IC Voltage Test	U900 Rated L6599D 16V (max) 8.85V (min)	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 12.52 V (2) 10 V (3) 12.47 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008/7/7	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2008/11/6	PRODUCT SAMPLE W0807D51	PASS	SANFORD SU	VINCENT TSENG
2009/1/22	PRODUCT SAMPLE W08010D40	PASS	SANFORD SU	VINCENT TSENG
2009/2/20	PRODUCT SAMPLE W08012E40	PASS	SANFORD SU	VINCENT TSENG

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