

MODEL : SD-150D-24

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 150 mVp-p (Max)	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	V1: 20 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 23 V~ 30 V	I/P: 115 VAC O/P:MIN LOAD Ta:25°C	21.77V~ 32.75 V	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 1 %~ -1 % (Max)	I/P:85VAC / 132 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.36 %~ -0.36 %	P
4	LINE REGULATION	V1: 0.3 %~ -0.3 % (Max)	I/P:85VAC / 132 VAC O/P:FULL LOAD Ta:25°C	V1: 0.05 %~ -0.05 %	P
5	LOAD REGULATION	V1: 0.3 %~ -0.3 % (Max)	I/P: 115 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.2 %~ -0.2 %	P
6	SET UP TIME	2000 ms (Max)	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	877ms	P
7	RISE TIME	50 ms (Max)	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	4.7 ms	P
8	HOLD UP TIME	24ms	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	34.2ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
10	DYNAMIC LOAD	V1: 2400 mVp-p	I/P: 115 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	483 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	85VAC~ 132 VAC 72VDC~ 144 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	82 VAC~ 132 VAC 71.8VDC~ 144 VDC	P
			I/P: LOW-LINE-3V= 82 VAC HIGH-LINE+15%= 151 VAC LOW-LINE-0.2V= 71.8 VDC HIGH-LINE+5%= 151VDC O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	TEST: OK	
2	EFFICIENCY	82% (TYP)	I/P: 115 VAC O/P:FULL LOAD Ta:25°C	82.9 %	P



150W Single Output DC-DC Converter

SD-150 series

3	INPUT CURRENT	2.1 A(TYP)	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	I = 1.8A	P
4	INRUSH CURRENT	22.5A	I/P: 96 VDC O/P:FULL LOAD Ta:25°C	I = 22.5A	P
5	LEAKAGE CURRENT	<0.75mA / 120VAC	I/P: 120 VAC O/P:NO LOAD Ta:25°C	L-FG : 0.62 mA N-FG : 0.62 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 %~ 135 %	I/P: 115 VAC O/P:TESTING Ta:25°C	128 % Hiccup mode, recovers automatically after fault condition is removed	P
2	OVER VOLTAGE PROTECTION	CH1: 31.5V~ 37.5 V	I/P: 115 VAC O/P:10% LOAD Ta:25°C	36.35 V Hiccup mode, recovers automatically after fault condition is removed	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 115 VAC O/P: FULL LOAD Ta:25°C	NO DAMAGE Hiccup mode, recovers automatically after fault condition is removed	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT	
1	TEMPERATURE RISE TEST	MODEL : SD-150D-12 1. ROOM AMBIENT BURN-IN : 8 HRS I/P: 24 VDC O/P: FULL LOAD Ta= 24 °C			P	
			NO	Position		ROOM AMBIENT Ta= 22.4 °C
			1	Q6		82.8°C
			2	T1		80°C
			3	D11		77.2°C
			4	C33		56.2°C
			5	L1		83.3°C
			6	C5		63.5°C
			7	LF1		68.8°C
			8	BD	94.5°C	
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 96 VDC O/P: 121% LOAD Ta:25°C	TEST : OK	P	
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 96 VDC O/P: 100%LOAD / 80%LOAD Ta= 0°C / -10°C	TEST : OK	P	

5	TEMPERATURE COEFFICIENT	± 0.03 % (0~25°C)	I/P: 96 VDC O/P: FULL LOAD	± 0.01% (0~25°C)	P
6	VIBRATION TEST	1 Carton & 1 Set Operating at I/P: 96 VDC NO LOAD (1) Waveform: Sine Wave (2) Frequency: 10~500Hz (3) Sweep Time: 10min/sweep cycle (4) Acceleration: 2G (5) Test Time: 1 hour in each axis (X.Y.Z) (6) Ta: 25°C		TEST : OK	P

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 1.5 KVAC/min I/P-FG: 2 KVAC/min O/P-FG: 0.5 KVAC/min	I/P-O/P: 1.8 KVAC/min I/P-FG: 2.4 KVAC/min O/P-FG: 0.6 KVAC/min Ta: 25°C	I/P-O/P: 4.5 mA I/P-FG: 7.7 mA O/P-FG: 3.8mA 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	I/P-O/P: 2G Ω I/P-FG: 2G Ω O/P-FG: 2G Ω NO DAMAGE	P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RADIATION	EN55032 CLASS B	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	PASS Test by certified Lab	P
2	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR: 8KV / Contact: 4KV	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	CRITERIA A	P
3	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 96 VDC O/P: FULL LOAD Ta: 25°C	CRITERIA A	P
4	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	SUPPOSE C33 IS THE MOST CRITICAL COMPONENT I/P: 96VDC O/P: FULL LOAD Ta= 25 °C LIFE TIME= 67181 HRS I/P: 96VDC O/P: FULL LOAD Ta= 40 °C LIFE TIME= 30064 HRS			P
2	MTBF	2897.06K hrs min. Telcordia SR-332 (Bellcore) ; 419.6K hrs min. MIL-HDBK-217F (25°C)			P

SAMPLE	TEST RESULT	TESTER	APPROVAL
RD SMAPLE	PASS	H.C.LIOU	MAX LIN