



Test Report : SKM10E-12

10W 1"x1" Package DC-DC Regulated Converter

■ DESIGN VERIFY TEST

Output Function Test
Input Function Test
Protection Function Test
Control Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

DESIGN VERIFY TEST
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-1.5 % ~ +1.5 % (Max)	I/P:5VDC O/P:FULL LOAD Ta:25°C	-0.32 %	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:5VDC O/P:FULL LOAD Ta:25°C	14 mV	P
3	LINE REGULATION	-0.2% ~ +0.2% (Max)	I/P:4.7VDC-9VDC O/P:FULL LOAD Ta:25°C	-0.001% ~ +0.004%	P
4	LOAD REGULATION	-0.2% ~ +0.2% (Max)	I/P:5VDC O/P:NO LOAD-FULL LOAD Ta:25°C	-0.010 % ~ +0.010 %	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	87 % (Typ)	I/P:5VDC O/P:FULL LOAD Ta:25°C	87.5 %	P
2	DC CURRENT	2298 mA / FULL LOAD (Max) 30 mA / NO LOAD (Max)	I/P:5VDC O/P:NO / FULL LOAD Ta:25°C	2277 mA / FULL LOAD 22 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110%~140% LOAD (Typ)	I/P:5VDC O/P:TESTING Ta:25°C	131%	P
2	INPUT UNDER VOLTAGE LOCKOUT	Power Up 4.4V (Typ) Power Down 4.2V (Typ)	I/P:TESTING O/P: 10% LOAD Ta:25°C	Vin turn off : 4.13V Vin turn on : 4.41V	P
3	SHORT PROTECTION	CONTINUOUS	I/P:9VDC O/P:FULL LOAD Ta:25°C	NO DAMAGE OK	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	Power on : R.C >5.5Vdc~75Vdc or open Power off : R.C <1.2Vdc or short	I/P:5VDC O/P:FULL LOAD Ta:25°C	OK	P

2	TRIM CONTROL	+10%~ -10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 10k ohm VR	I/P:5VDC O/P:10% LOAD Ta:25°C	Trim DOWN -9.97 % Trim UP +10.02 %	P
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■ SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1500 VDC/min	I/P-O/P:1500 VDC/min Ta:25°C	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>100MΩ NO DAMAGE	P

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT								
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 12HRS I/P:5VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:5VDC O/P:FULL LOAD Ta=71°C			P								
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>34.0°C</td> <td>81.2°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	34.0°C	81.2°C		
NO	Position	1	2										
1	CASE	34.0°C	81.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P:5VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P								

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 0.687 M.T.B.F : 1,455,632 HRS 1,455,632			P

TEST RESULT	TESTER	APPROVAL
PASS	ALROY WANG	VINCENT ZENG