



Test Report : GD2-12203.5

2W SIP Package IGBT Sic Gate Driver Power DC-DC Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection 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	-8.0% ~ +2.0 %	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1: -3.29% V2: +0.03%	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1: 24mV V2: 20mV	P
3	LINE REGULATION	-12% ~ +12%	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	V1: -10.36% ~ +10.20% V2: -10.97% ~ +11.14%	P
4	LOAD REGULATION	-5.0% ~ +5.0%	I/P:12VDC O/P:10% LOAD~FULL LOAD Ta:25°C	V1: -2.13% ~ +2.04% V2: -2.80% ~ +3.30%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	80%	I/P:12VDC O/P:FULL LOAD Ta:25°C	80.41%	P
2	DC CURRENT	217 mA / FULL LOAD 43 mA / NO LOAD	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	208.5mA / FULL LOAD 34.35mA / NO LOAD	P
3	START UP TIME	100ms max.	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1: 18.2mS V2: 2.9mS	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	NO DAMAGE AUTO-RECOVER	P

SAFETY TEST
SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:6.2K VDC/min	I/P-O/P:6.2K 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 : 4HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:FULL LOAD Ta=85°C 3. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:50% LOAD Ta=90°C			P									
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>44.5°C</td> <td>102.4°C</td> <td>107.7°C</td> </tr> </tbody> </table>	NO	Position		1	2	3	1	CASE	44.5°C	102.4°C	107.7°C	
NO	Position	1	2	3										
1	CASE	44.5°C	102.4°C	107.7°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC 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 : 0.07153 M.T.B.F : 13,980K HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG