

Report NO: 11E0A0005_I

FSP060-DBAB1 of TKS-G21-CV05-001-DX Power Electronics Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____			
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date
12/21/2011

Approval
Jansin Lee

Test Engineer
Sean Hsu

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1. Project

FSP060-DBAB1 AC-DC Adapter for TKS-G21-CV05-001-DX

2. Power Manufacturer

FSP

3. Team Member

PM : Max Ma ; H/W : Max Chen

4. Test Equipment

- 4.1. PCB : GENE-CV05 REV.A0.2 BIOS: R0.5 (11/15/2011)
- 4.2. CPU : Intel Atom D2700 2.13GHz
- 4.3. Memory : DSL DDR3-1333 4GB
- 4.4. HDD : Toshiba , MK1060 , 100GB
- 4.5. AC Adapter : FSP , Model : FSP060-DBAB1 , O/P : 12V/5A , 60Watt
- 4.6. LCD Monitor : CHIMEI , Model : A170E2-T08
- 4.7. USB Mouse : Logitech , Model : M-BT85
- 4.8. USB Keyboard : Logitech , Model : Y-BL49

5. AC Adapter Spec

AC Input : 100VAC~240VAC / 47Hz~63Hz

DC Output : 12Vdc Min Load : 0A Full Load : 5A / 60W

6. Test Item

Test Item	Test Condition / Specification		Sanction	
			Measured	Result
6.1. AC Input Current	I/P:115VAC	1.7A	1.3A	PASS
6.2. MAX Inrush Current	I/P:115VAC	A	8.8A	-
	I/P:230VAC	A	9.5A	-
6.3. Input Frequency & Voltage	I/P:90VAC/47HZ	■ON □ OFF	-	PASS
	I/P:90VAC/63HZ	■ON □ OFF	-	PASS
	I/P:264VAC/47HZ	■ON □ OFF	-	PASS
	I/P:264VAC/63HZ	■ON □ OFF	-	PASS
6.4. Switching Test	Switching Time: 0.5 Sec MIN Load / Full Load	@90VAC ■ON □ OFF	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@115VAC ■ON □ OFF	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@230VAC ■ON □ OFF	-	PASS
	Switching Time: 0.5 Sec MIN Load / Full Load	@264VAC ■ON □ OFF	-	PASS
6.5. Efficiency	I/P:90VAC O/P:5A	@%Min	84.51%	-
	I/P:115VAC O/P:5A	@85%Min	85.35%	PASS
	I/P:230VAC O/P:5A	@85%Min	86.45%	PASS
	I/P:264VAC O/P:5A	@%Min	86.54%	-
6.6. Line Regulation	I/P:90VAC~264VAC	<±1%	0.25%	PASS
6.7. Load Regulation	I/P:115VAC O/P:MIN~FULL LOAD	<±5%	4.18%	PASS
	I/P:230VAC O/P:MIN~FULL LOAD	<±5%	4.6%	PASS
6.8. Over-Voltage Protection	I/P:230VAC O/P:MIN LOAD	V1 : 13~18 (MAX)	-	-
6.9. Over-Circuit Protection	O/P: 12V	7.2A(MAX)	6.42A	PASS
6.10. Over-Load Protection	I/P:90VAC O/P:MIN LOAD	144%	126%	PASS
	I/P:115VAC O/P:MIN LOAD	144%	128%	PASS
	I/P:230VAC O/P:MIN LOAD	144%	125%	PASS
	I/P:264VAC O/P:MIN LOAD	144%	126%	PASS
6.11. Short Circuit Protect	I/P:115VAC O/P:MIN LOAD	12V&GND Short	-	PASS
	I/P:230VAC O/P:MIN LOAD	12V&GND Short	-	PASS

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6.12. Line Voltage Surge	O/P: FULL LOAD	Surge voltage from 132VAC to 147VAC (0.5sec), back to 132VAC	-	PASS
	O/P: FULL LOAD	Surge voltage from 264VAC to 293VAC (0.5sec), back to 264VAC	-	PASS
6.13. Line Voltage Sag	O/P: FULL LOAD	Sag voltage from 108VAC to 80VAC (0.5sec), back to 108VAC	-	PASS
	O/P: FULL LOAD	Sag voltage from 198VAC to 161VAC (0.5sec), back to 198VAC	-	PASS
6.14. Ripple & Noise	I/P:115VAC O/P:FULL LOAD	$\leq 150\text{mv}$	96mv	PASS
	I/P:230VAC O/P:FULL LOAD	$\leq 150\text{mv}$	98mv	PASS
6.15. Setup Time	I/P:115VAC O/P:FULL LOAD	4S(MAX)	875ms	PASS
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	855ms	-
6.16. Hold up Time	I/P:115VAC O/P:FULL LOAD	8mS(MIN)	19.5ms	PASS
	I/P:230VAC O/P:FULL LOAD	8mS(MIN)	81.5ms	PASS
6.17. Rise Time	I/P:115VAC O/P:FULL LOAD	mS(MAX)	24.8ms	-
	I/P:230VAC O/P:FULL LOAD	mS(MAX)	24.7ms	-
6.18. Turn on Overshoot	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	PASS
	Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD		-	PASS
6.19. Turn off Undershoot	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
	Turn off undershoot shall not exceed 10% over nominal voltages		-	PASS
6.20. Remote ON/OFF	Simulate TTL signal to test this function			-
6.21. Power Good Signal	Shall go high level with a delay of100~500ms			-
6.22. Power On In Low Temperature	I/P:115VAC (0°C) After 2HR Power On			-
6.23. Power On In High Temperature	I/P:115VAC (50 °C)After 2HR Power On			-
6.24. System Power Consumption Test	No Run Prime95	I/P:100VAC 0.32A 13.6W	O/P: 12V/0.9A	PASS
	Run Prime95	I/P:100VAC 0.37A 16.9W	O/P: 12V/1.2A	PASS