





FADOS MUX MULTIPLEXER MODULE

FADOS Multiplexer Module uses for testing and checking electronic circuit boards. The main purposes is creates VI graphs of circuit board test points in a while. So; the user measure much tests points in a short time.

FADOS MUX Multiplexer Module works with FADOS9F1 together. It connects to FADOS9F1 with a connector and takes energy from FADOS9F1. FADOS MUX has 96 outputs. The first (front) 48 output is "A" channel; the second (back) 48 output is "B" channel. A - B channels measure at the same time.

FADOS MUX connects parallel to each other so that the output changes according to how many products connect parallel. For example; if 2 FADOS MUX connect parallel the output is $96 \times 2 = 192$.



FADOS MUX has 3 accessories; A – B channel 50 pin connectors and 10 pin connectors for connection to FADOS9F1.

The Multiplexer button is clicked in the FADOS9F1 program to open the multiplexer screen.

All the keys to be used for trouble shooting are placed on the left hand side of the panel.



	Voltage Stage(s)	: The voltage to be applied to the board is selected by manually setting									
1.5 V 3 V 6 V	the ±1.5 V, ±3 V, ±	\pm 6 V, \pm 12 V stages from the voltage stage selector. Only one voltage may									
12 V	be selected at a time for a given test.										
	Frequency Stage	(s) : The Frequency to be applied to the board is selected by									
Low Frq.	manually setting th	ne Low Frequency, Test Frequency, stages from the Frequency stage									
Test Frq.	selector. Only one F	requency may be selected at a time for a given test.									
Low	Current Stage(s) : The current to be applied to the board is selected by manually setting										
Med1	the Low Current, Medium1 Current, Medium2 Current, stages from the Current stage selector.										
Med2	Only one Current m	ay be selected at a time for a given test.									
C Show Pin VI	Show Pin VI	: We can see VI graph of pin which we test or measure.									
• Ref Test VI	Ref. Test VI	: Show the VI graph of reference pin (saved electronic circuit board)									
	can measure the internal resistance of the capacitor and determine its quality when this										
Pin: 9 -	feature is selected.										
Tolerance: 5	Pin	: Show the VI graph of pin that measure.									
Set	Tolerance %	: Defines the tolerance range for the test point. It can be changed by									
	the user.										
1 To 40	Set	: Set the voltage, frequency and current stage for testing component.									
	То	: Shows which datas that checks.									
Test Point: 41	Test Point	: Shows the name or code of the point under test.									
REFERENCE	Reference	: Before the data are recorded in the memory, create VI graphs of									
	reference board from pin to pin.										
Recording	Recording	: Opens the Recording window. The recording window menu is used for									
r	Recording or retriev	ing the recorded data.									
TEST	Test	: Test pins from Memory.									
Data Form	Data Form	: Shows Mux Data Form.									
1	Clear Table	: Clear the table of Mux Data Form.									
CLEAR TABLE											

Voltage, Frequency, Current Selection

The Multiplexer test voltage stages are ± 1.5 V, ± 3 V, ± 6 V, and ± 12 V. The FADOS apply a current-limited sinusoidal test voltage in the above test voltage values to the point selected on the electronic circuit board through a series resistor.

VI Test screen is also divided in to squares of the same size. The squares on the horizontal axis provide information on the voltage ranges.

The Multiplexer current stages are Low Current, Medium1 Current, and Medium2 Current.

The Multiplexer frequency stages are Low Frq, and Test Frq.

Select voltage, current and frequency stages by buttons that are placed on the left hand side of the panel.

GENERAL USAGE oF MULTIPLEXER INFORMATION

- When run software, <u>Power The IR Temperature</u> <u>Test Screen</u> opens and an input is entered to the <u>Multiplexer Screen</u> with the <u>Multiplexer Button</u>.
- Firstly, determine how many pins that you II check from _____ to ____.
- Set the voltage current and frequency of pins.

For example;

Pin1: Select 6V, Test Freq and Med1 Current and click "Set"

Pin2: Select 12V, Test Freq and Med1 Current and click "Set"

Pin3: Select 6V, Test Freq and Low Current and click "Set"

Also we Set the "Tolerance"

Every data be able to see in Mux Data table.



Note: Mux data table is moveable; you can move it as you want from top bar part according to resolution of screen especially for low resolution.

• After Set the Voltage, Current, Freq and Tolerance; click "Reference" for creating VI graph of electronic pins. Wait a while for "REFERENCE OK"

													No	Pin	Volt	Frq.	Cur.	Tol.	Diff. % Resul	
	and and	6 V											1	1 A	6 V	Test	M. 1	5	Din. 70 Tead	- F
	1.5 V 3 V	T. Fr.											2	1 B	6 V	Test	M. 1	5		10
to l	6 V	1. 14.											3	2 A	12 V	Test	M. 1	5		11
ш	12 V	M. 1											4	2 B	12 V	Test	M. 1	5		1
~													5	3 A	6 V	Test	Low	5		
- IR TEST	Low Frg.												6	3 B	6 V	Test	Low	5		
œ	Test Frq.												7	4 A	6 V	Test	Low	3		
y													8	4 B	6 V	Test	Low	3		
POWER	Low												9	5 A	6 V	Test	M. 2	3		
0	Med1												10	5 B	6 V	Test	M. 2	3		-81
													11	6 A	6 V	Test	M. 2	3		-81
	Med2												12	6 B	6 V	Test	M. 2	3	-	-81
_													13	7 A 7 B	6 V 6 V	L.F.	M. 2 M. 2	3		-81
	Show Pin VI												14	8 A	6 V	L.F.	M. 2	3		-11
	· Ref Test VI												16	8 B	6 V	L.F.	M. 2	3		11
	- INCL - ICSL VI												17	9 A	6 V	Test	M. 2	3		11
۲													18	9 B	6 V	Test	M. 2	3		11
ш	Pin: 14 🕂												19	10 A	6 V	Test	M. 1	3	1	11
ST													20	10 B	6 V	Test	M. 1	3		
TESTER	Tolerance: 3																			
-																				
5	Set																			
-																				-81
	1 To 20																			-81
													-							-81
	Test Point: 21												-							-11
		-	2.00	- 24 - 24			a march												-	10
	REFERENCE	Set	: Adjus	st voltage, fre	quency an	d current o	f pin 13	and 14	(Front 7	A and R	ear 7B)		-							11
~		Refere	nce Creat	e VI Graphs	of referance	e hoard fro	m 1 nin	to 20 ni	n											
ū.	Desertion						an i pai	10 20 pi												
×	Recording	Record	ting : Open	a mux file or	save the n	eferance														
"																				
٩																				
F.																				-81
MULTIPLEXER	Data Form												-						-	-81
ž	I Data Form	_																		-81
	CLEAR TABLE					REF	EREN	ICE C	DK 🛛										-	
	CLEAR TABLE	100																		

 After taking reference; click the "Recording" Button for record the VI graph of pin. The Record Mux File window open.



New Folder: New Folder opens a new folder on the hard disk with the name written to that line. **File:** The name of the data to be saved is entered.

Open: Opens the saved test data selected from "Data".

Save: Saves the graph of the pins. (Reference)

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• The file selected from menu and click "open".

				No	Pin	Volt	Frg.	Cur.	Tol.	Diff %	Result	
	and and	6 V		1	1 A	6 V	Test	M. 1	5	Dill. 70	Result	Ē
	1.5 V 3 V	T.Fr.		2	1 B	6 V	Test	M. 1	5	-		
ST	6 V			3	2 A	12 V	Test	M. 1	5			
ЩЦ	12 V	M. 2		4	2 B	12 V	Test	M. 1	5			
с				5	3 A	6 V	Test	Low	5			8.
	Low Frq.			6	3 B 4 A	6 V 6 V	Test Test	Low	5	-		1.
Щ.	Test Frq.			8	4 A 4 B	6 V	Test	Low	3	-		
POWER - IR TEST	1			9	5 A	6 V	Test	M. 2	3	-		
ď	Low			10	5 B	6 V	Test	M. 2	3			1
	Med1			11	6 A	6 V	Test	M. 2	3			
	Med2			12	6 B	6 V	Test	M. 2	3			8.
_				13	7 A	6 V	L. F.	M. 2 M. 2	3			
	○ Show Pin VI			14	7 B 8 A	6 V	L.F.	M. 2	3			
	· Ref Test VI			16	8 B	6 V	L.F.	M. 2	3	-		
	Hun. Hour H			17	9 A	6 V	Test	M. 2	3			1
α I	Pin: 11 ÷			18	9 B	6 V	Test	M. 2	3			
Ë				19	10 A	6 V	Test	M. 1	3	-		81
TESTER	Tolerance: 3			20	10 B	6 V	Test	M. 1	3	-		
μ										-		
5	Set											1
>												
	1 To 20											
	1 1 1 20											
	Test Point: 21									-		
										-		
	REFERENCE	Set : Adjust voltage, frequency and current of pin 11 and 12 (Front 6A and Rear 6B)										1
2		Reference : Create VI Graphs of referance board from 1 pin to 20 pin										
ш	Recording											
ŵ		Recording : Open a mux file or save the referance								-		
-		Test : You can test to a board										
Ë	TEST											
MULTIPLEXE												1
2	Data Form											
<		File Opened										
	CLEAR TABLE		_							-		
												•

Click "Test" and software test pins with reference pins (saved pins) •

_				No	Pin V	olt Frq	Cur.	Tol.	Diff. %	Result
	1.5 V 3V	6 V		1		V Tes		5	0	OK
		T. Fr.			1 B 6			5	0	OK
TEST	6 V				2 A 6			5	0	OK
Щ.	12 V	M. 1				V Tes		5	0	OK
<u>щ</u>						V Tes		5	0	OK
7	Low Frq.					V Tes V Tes		5	13 O	
Ω.	Test Frq.				4 B 6			5	0	OK OK
POWER					5 A 6			5	0	OK
0	Low				5 B 6			5	0	OK
-	Med1	Recorded data			6 A 6			5	0	OK
	Med2				6 B 6			5	0	OK
	mout				7 A 6	V Tes	t M. 1	5	0	ОК
				14	7 B 6	V Tes	t M. 1	5	11 0	ut of T.
	Show Pin VI			15		V Tes		5	0	OK
	Ref Test VI				8 B 6			5	2	OK
100		Faulter Date. Testing				V Tes		5	0	ОК
E E	Pin: 24 +	Faulty Data - Testing				V Tes		5	31 0	
Ĕ	· · · · · · · · · · · · · · · · · · ·				10 A 6			5	1	OK
EST	Tolerance: 5				10 B 6			5	0	OK OK
۳	rolerance. 5				11 B 6			5	3	OK
	Set					V Tes		5	0	OK
>					12 B 6			5		ut of T.
						V Tes		5	0	OK
	1 To 40			26	13 B 6	V Tes	t M. 1	5	0	OK
					14 A 6	V Tes	t M. 1	5	0	OK
	Test Point: 41					V Tes		5	0	OK
	_	Set : Adjust voltage, frequency and current of pin 23 and 24 (Front 12A and Rear 1	28.)		15 A 6			5	1	OK
	REFERENCE	Set . Aujust voltage, nequency and current or pin 25 and 24 (Front 12A and Real 1	20)		15 B 6			5	0	OK
œ		Reference : Create VI Graphs of referance board from 1 pin to 40 pin				V Tes		5	0	OK
×	Recording	Recording : Open a mux file or save the referance			16 B 6			5	1	OK OK
<u> </u>		Recording . Open a mux me or save me referance			17 B 6			5	0	OK
-		Test : You can test to a board			18 A 6			5	0	OK
<u>∎</u>	TEST				18 B 6			5	0	OK
NLTIPL					19 A 6			5	0	ОК
5	Data Form			38	19 B 6	V Tes	t M. 1	5	0	OK
Σ		4 POINTS OUT OF TOLERANS				V Tes		5	1	OK
	CLEAR TABLE	4 POINTS OUT OF TOLERANS		40	20 B 6	V Tes	t M. 1	5	0	OK
						_				
				-						

See result of the Test. •

FADOS MUX; Dimension : 120 x 110 x 35 mm

Weight: 200 grams