Test Results EV-105 board Multi-phase, IR35204 (Salem Controller)

10/26/2016





Specs

- 1) Test the board for 3-phase with IR3555 at 90A. 0.9V + / 30mV TOL, 90A max.
 - a. Take transient picture: Step load 60A to 90A worst case (assume 5V/us). 1% DC; 2% AC.
 - b. DC accuracy
 - c. AC accuracy.
- 2) Test the same board by turning off one of the IR3555 and test for 50A (So only 2 stages are ON, 2 @ IR3555).
 0.9V + / 30mV TOL, 50A max
 - a. Take transient picture: Step load 25A to 50A (assume 5V/us) worst case.
 - b. DC accuracy
 - c. AC accuracy





Bode Plot



Vertical	Digita		Acq	Trigger	Display	Cursors	Measure	Math	Masks	Save	Recall	Help			Те	й —) x	J
F		1	1 1	1 1	I I I	<u> </u>	i i je i	- 1 I	+ • •	- u - i - i	1 1 1	1.1.1.	1 11 11	1.1.1	a na d	1 1	1	1
<u> </u>		а ж							-								-	
-	ାଲ ଶ	ର୍ଜ୍ଜି କାର୍ଣ୍ଣ କାର		8			S N N N N		1	8 - 10 10 - 10		a w a			्र जन्म का क		e	
									Ŧ								-	-
-									Ŧ								-	
	a w - m	ar Al 12 M	52-55	5) 5) 50		e E 12 25 1	2 N <u>2</u> N			- 12 15 - 13		12 (R 12)		5 10 10	N 22 8		0.90	
-				81 43					+								-	-
									Ţ								-	-
<u>.</u>	8.25 18	5 R.S.	診 営		a a a g	1 8 8 1	a a g a			n n g	2 2 2		2 8 2	8 2	* * *	12 25	8 20 <mark>-</mark>	
-		0							-								-	
-	1			. L. bur	A The second		d alter		. I June 1			1	1.1.1.1.			have	-	
FAIL	A Mich Ville	1 CAN	ti di Ula	nds AMUA		a ha	n hai	d of the last of wheel		M d Autoria	de Miller († 1	U. H. Wardd	n a tha an the second	the little	ANNA	Un Dividad d	With	
Section 2	ing the state of the	69999 9 36	ner ner	4.00 (2015)	ing tag had	der Wille Konst	ene endered	entente ente	ana kasika	eriete audra	and ha that a l	aryan yan y	an sur ani	i tanàn kalèn ikang	tahé Malakara	dad oo daa	a kana	11.8
																	S REPORTED	
				and the state			a constant a sec			an dissona da			arabia fita			nie kratska		
erti depte	lastar asorta	kiiseeseer	enter des	w ideale	Materia da	alinganyi k	n kara kara	an <mark>dekane bek</mark> t	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	haddir ydd	inininininini Katerranin	ad hours	M IN MARK	"Marken Harrista	hanpa hanpa	Al-An triki	anterio d	
ettyklike	laisin (said)	kuduand	rhaina	<mark>wiphingh</mark> a	a de l'allet de la de	alkingary k	na an a	understadiet.	YAKAWA MA	manaportada	hander ferheite	della filosopolia (ani periodena di	With the first	halada ya	Alexand ia	anu da	
ettyktyke	(distance)	ku ya ya ya	r Maria	wiptimula	ann a tha tha ann an a	alkingary N	navarrah n an	underson deter	1 1 1	inalipentida	hande fakeja	tali ali uni ana	ani panaina	ndan <mark>a</mark> dan kata da	hear an	Ale koo nika	a nnad T	
ettjahphar	liyek evely	ki ky many	rmm)w	paydinays	i pirining da	angeradara in ja	<u>איזאיזאאין</u> י	aydd dawr ddar	Aleman de la companya	ente prindet	hindry they are	entral bounder	an ye mai na	nan orden og som	hanin an	(li fantrike	(dinkors)	
	linda marth	kurdunda k	p May Mark	hathquard);	in politation population	alwiqary)x	himin (1949)	an <mark>da kana lak</mark> t		nundennagi	inni i tangi	edi forpilaj	and A. Lovy at	amidradanisisi	anitanja Anitanja	All Annu A n	(Alakary)	
	layula asada	kiyaluan k	alini in	wipting		olikiqary).	naan (an fa	an <mark>detenen dete</mark> t	Y <mark>A (¹ YA (1 Y </mark>	una di una di Una di una di Una di una di	inna ta	delle flougelike	an yana an	navlada nisind	ya wa na	All Angeler An	(Contract)	
	lania and a	Kurloort			inger Verforder geholder	alwiqtar y N	(1.1478-1)*** *	and band data	101/(1940/1946) 	enndousne	a a a	edital koopulasi	<mark>an y</mark> y na i w	andrahaina	ya ku da na	n n	dinter of	
	o o co	Kurdeneder	NUMPA a a		i ninini nini	aniwaqaa ya	(1.147r()*r()	an <mark>der</mark> ande <mark>r</mark> eter	1 <mark>04/(*1404) </mark>	norgentada	inner for and	edtol kompilati	and the second	and and a start	n an	(Lipani pe	(11) (11) (11) (11) (11) (11) (11) (11)	
	, With With	Kuritan k	 42 − 64 43 − 64 44 − 64 45 − 64 	MP (INF)		olwiqar y i	(haliwatiki di mengerika) Maliwatiki di mengerika di mengeri			enni gerriteki	in an a	ente di la compañía (and and a list of	nan an	(fil paraista	(4100000) 	
	line a contraction of the second s	Kurdunuk		within	n martin faran ka	nkiqing)i	<u>, ((()))</u>			HANY (Minde	, and Judi	een al an	WIT I WART		<u>rana na mana na</u>	(fillynnisty)	dinter of	20
	(University)	<mark>Kurdinank</mark>		MAN TANK	n mit i tri kirka	nika garyin	<u> </u>	n ykterelist.	1744740481841 	HANY (Mista)	, , , , , , , , , , , , , , , , , , ,	ent forgality	WIT I THE WAR	and and and	<u>wata</u> n	(li fanni a	(4744) (1974)	
	a a Dayla ywdy	Kurdinaak K		MAN TANK	n mit i tanaka	nika garyin	<u> </u>	an alf the angle of the angle	17447404841 1	erriyen da	, and a second	ont formation	14) Y (14) Y	*****		(1) (1) (1) (1)		20
	n n Ingin ngal					niking myk		n ykraiten (k. K.		erriyen da		nt found		*****		(U parain pa		20
	5.0mV/c		μ μ μ μ μ μ μ μ μ	Β ₀ γ:20.0		MKIQTO)N					10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	NG POIN	20.	0.ps/dv 1.2	25GS/s	800ps	4/// (***)	20
) 5.0mV/c			₩₩₩₩₩ ₩	<u></u>	NK QUYA				Non	101 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	W Aut	245 - C. 25		25GS/s	800ps	/4)//	20
) 5.0mV/c	Val	ue	Mean	M M M M Sm [8.0m	n M 13.6r			Count Inf	Non	10111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mV Aut	o Sto	0µs/div 1.2 opped 118 acqs	25GS/s	800ps	1	20

Output Voltage Ripple, 90A load



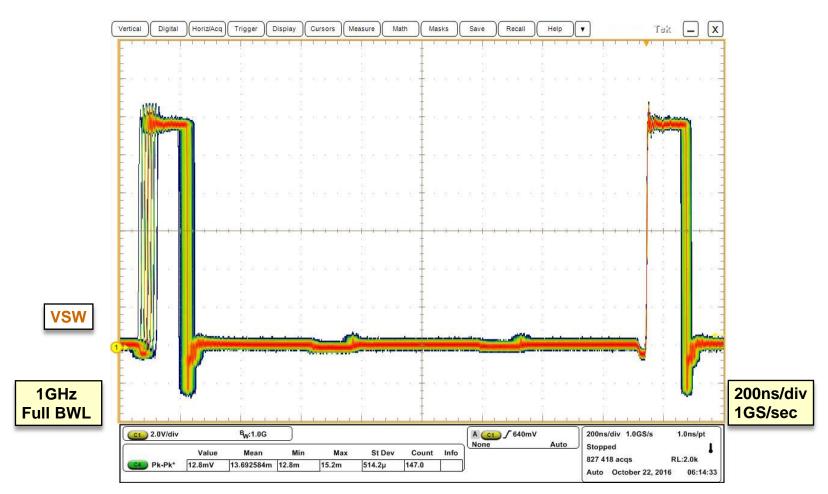




VSW node at 90A load with Persistence, Fsw: 600KHz

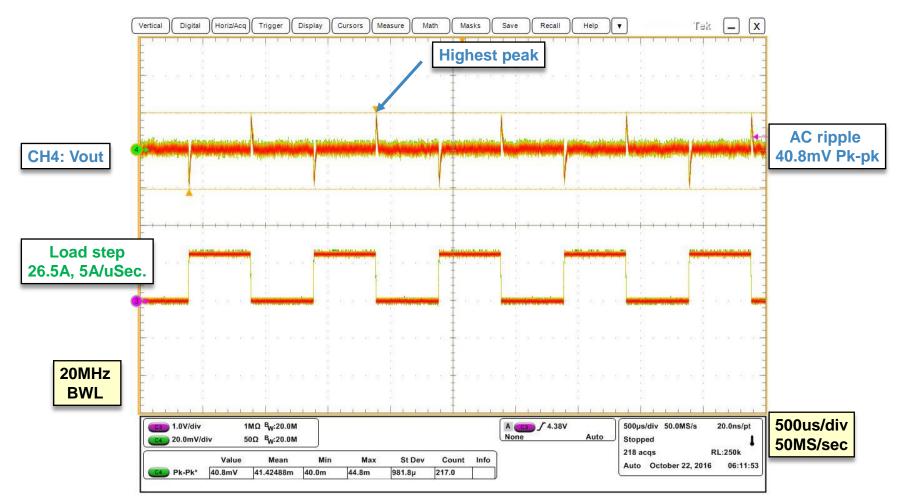
Copyright © Infineon Technologies AG 2015. All rights reserved.





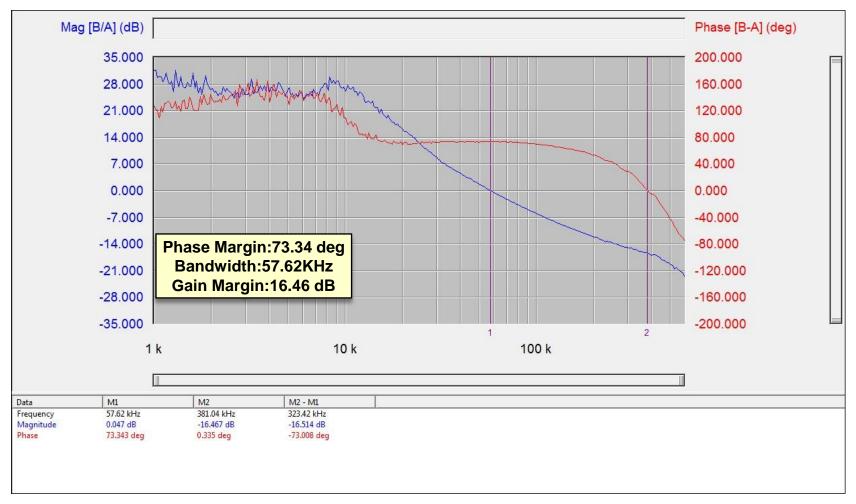
VSW node at 90A load





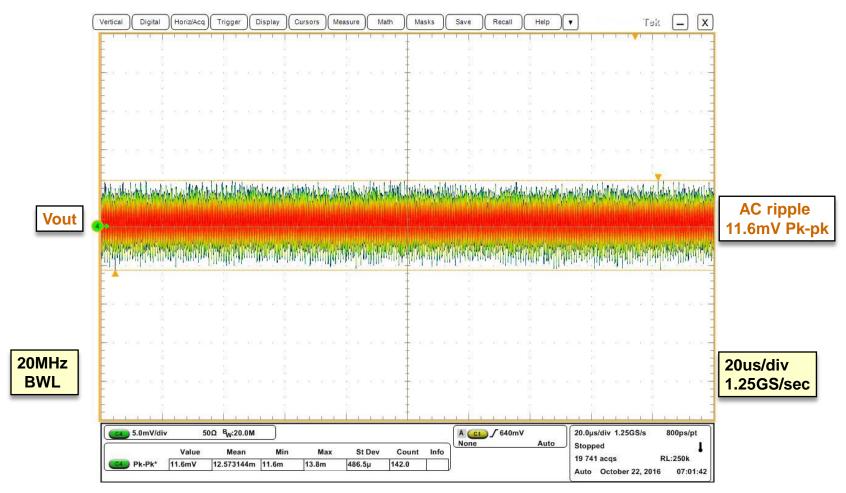
Transient Response, 60A to 86.5A step (5A/us)





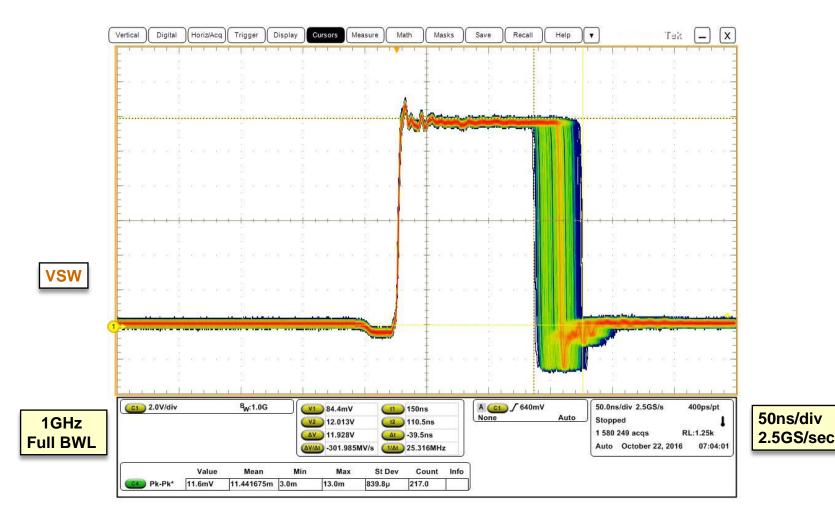
Bode Plot





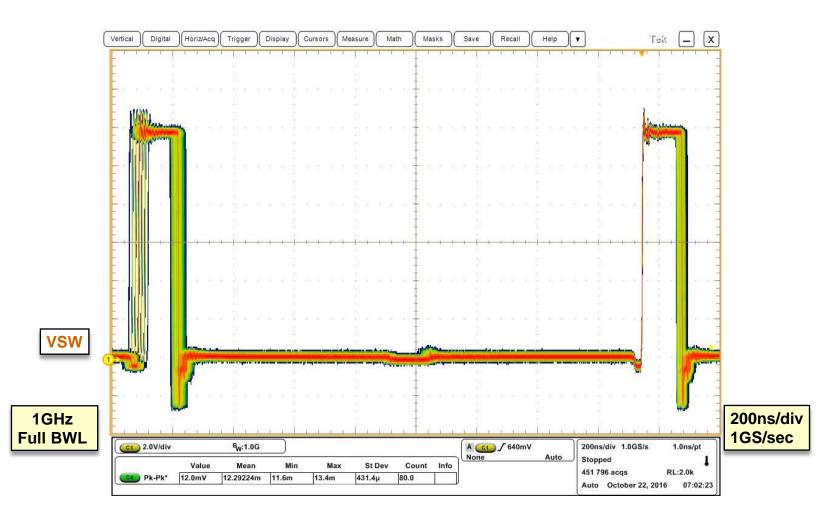
Output Voltage Ripple, 50A load





VSW node at 50A load





VSW node at 50A load

IR35204-V0P9 Core rail

2 Phase (IR3555)- 50A

Digital

Horiz/Acq

Trigger

Display

Cursors

Measure

Highest peak

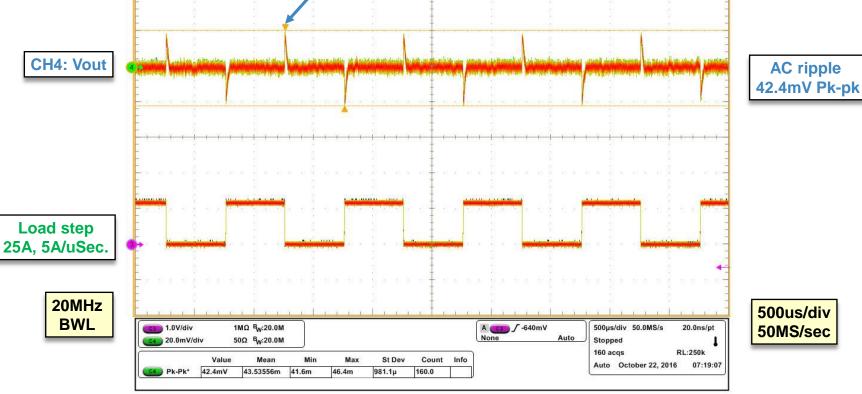
Math

Masks

Save

Recall

Vertical



.

Tek

X

Help

Transient Response, 25A to 50A step (5A/us)



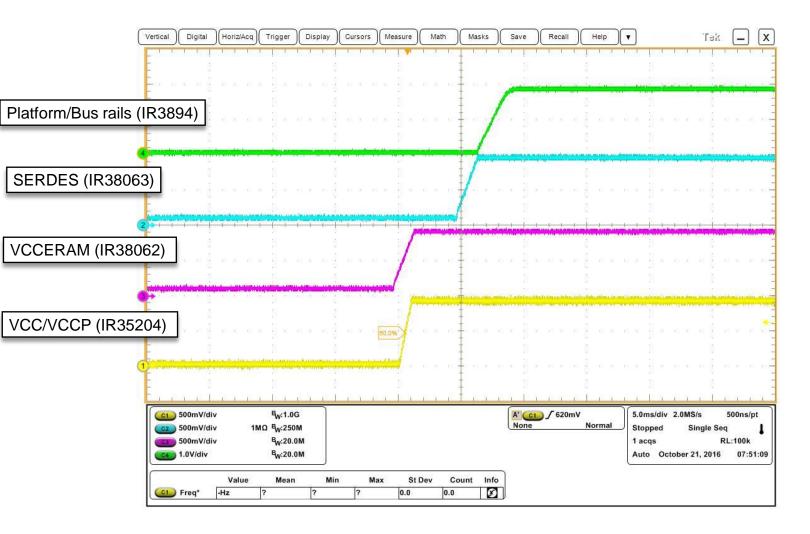


Specs

- Scope shot of all rails relative to each other if you can: IR35204 out, IR38062, IR38063, IR3894. Show the sequencing from enable.
 - Set the ENa for IR35204, IR38062 and IR38063 off the same enable On/Off. Trigger IR35204 and IR38062 to go on first, followed by IR38063 (SERDES rail), then last the IR3894. If you have to, add 0ms on IR38062 ton delay; and 2-3ms on IR38063 ton delay. Then send the PGood from IR38063 to ENb of the input of IR3894 ---- the sequence ON should look like 1) VCC/VCCP (IR35204) and VCCERAM (IR38062) together; 2) SERDES (IR38063); then 3) Platform/Bus rails (IR3894).
 - Then for sequence off the reverse order.

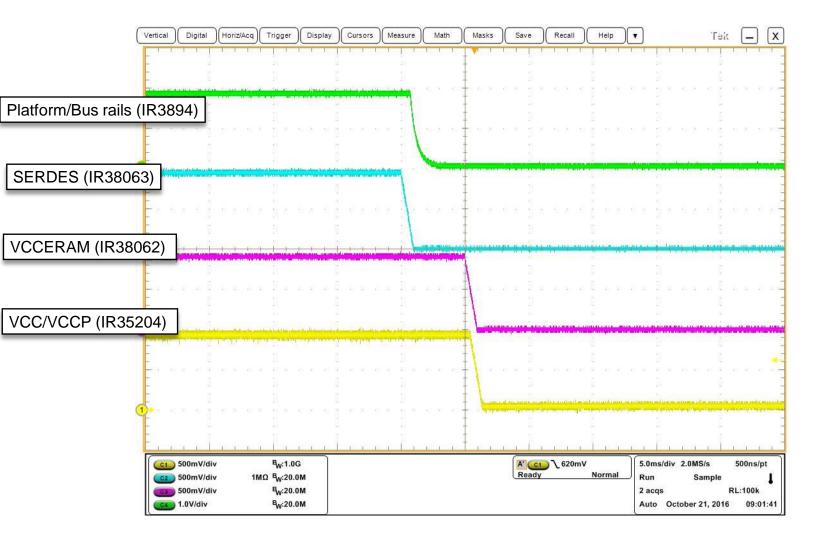


Sequence ON





Sequence OFF





Part of your life. Part of tomorrow.

