1. Finish: ENIG (Electroless Nickel Immersion Gold), nickel layer 1 ÷ 4 µm, gold layer 0.076 ÷ 0.2 µm

2. All gerber files generated as a top view

3. Gerber files for internal power planes have to be inverted

4. Fabricate according IPC-A-600

5. Non-conductive epoxy ink recommended for silkscreen

6. Silkscreen should not cover any exposed copper, silkcreen gerber data have to be trimmed eventually

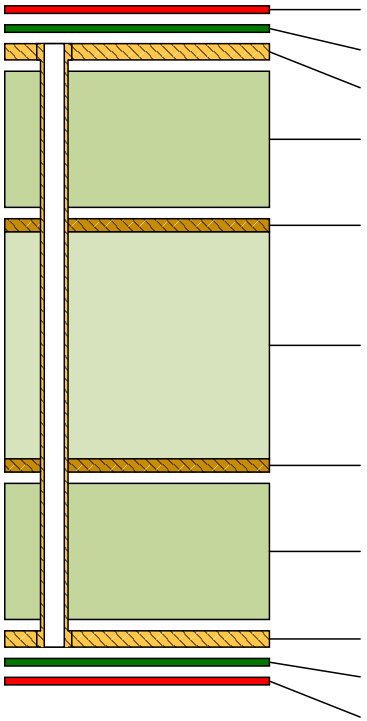
7. All holes diameter refer to final diameter after eventual plating

Gerber and drill file extensions table

Gerber files	
.GTO	Top side silkscreen
.GTP	Top side solder paste mask
.GTS	Top side solder mask
.GTL	Top layer L1_TOP
.GP1	Internal power plane L2_GND - has to be inverted
.GP2	Internal power plane L3_PWR - has to be inverted
.GBL	Bottom layer L4_BOTTOM
.GBS	Bottom side solder mask
.GBP	Bottom side solder paste mask
.GBO	Botom side silkscreen
.GM1	Board outline
Drill files	
.TXT	Layer pair L1_TOP to L4_BOTTOM

Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
PCB fabrication notes and requirements		Fabrication document	Sheet 1 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

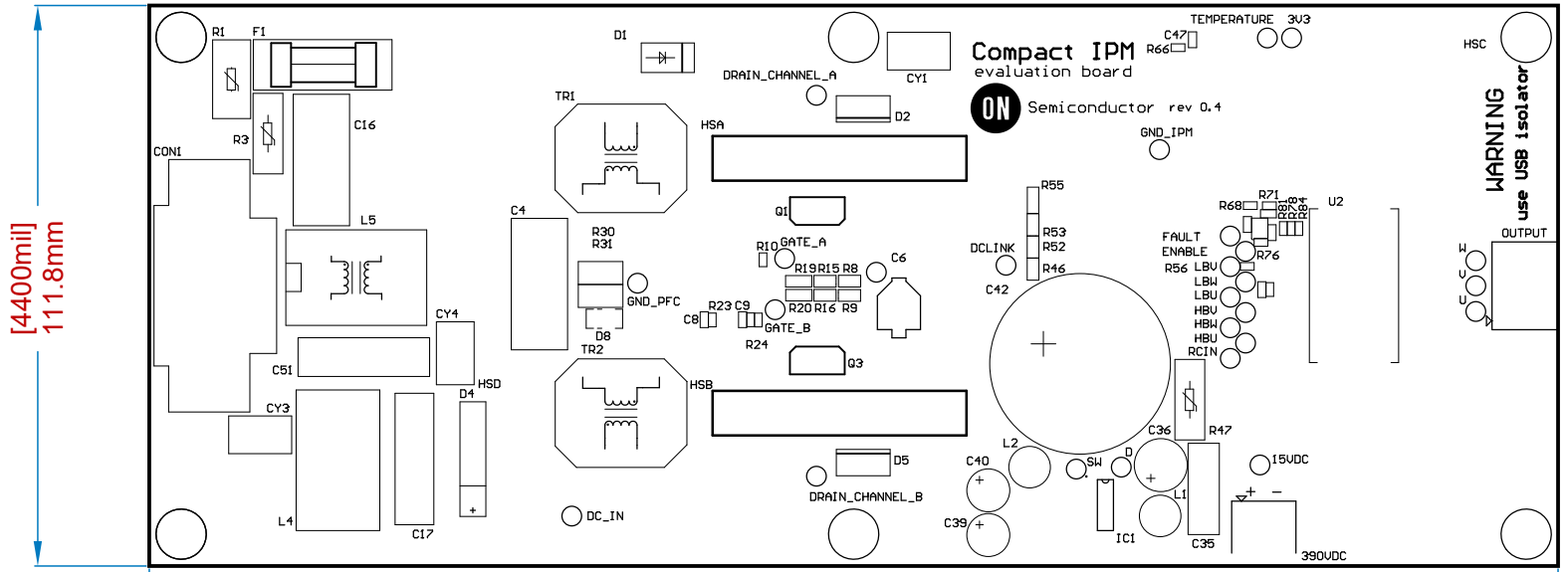
Layer Stack



Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.0100mm(0.394mil)	Solder Resist	Solder Mask	GTS
Copper	L1_TOP	0.0430mm(1.693mil)		Signal	GTL
Prepreg		*0.3600mm(14.173mil)*	*2 x 7628(FZ01) IS400*	*Dielectric*	
Copper	L2_GND	0.0350mm(1.378mil)		Internal Plane	GP1
Core		*0.7100mm(27.953mil)*	*4 x 7628M IS400*	*Dielectric*	
Copper	L3_PWR	0.0350mm(1.378mil)		Internal Plane	GP2
Prepreg		*0.3600mm(14.173mil)*	*2 x 7628(FZ01) IS400*	*Dielectric*	
Copper	L4_BOTTOM	0.0430mm(1.693mil)		Signal	GBL
Surface Material	Bottom Solder	0.0100mm(0.394mil)	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

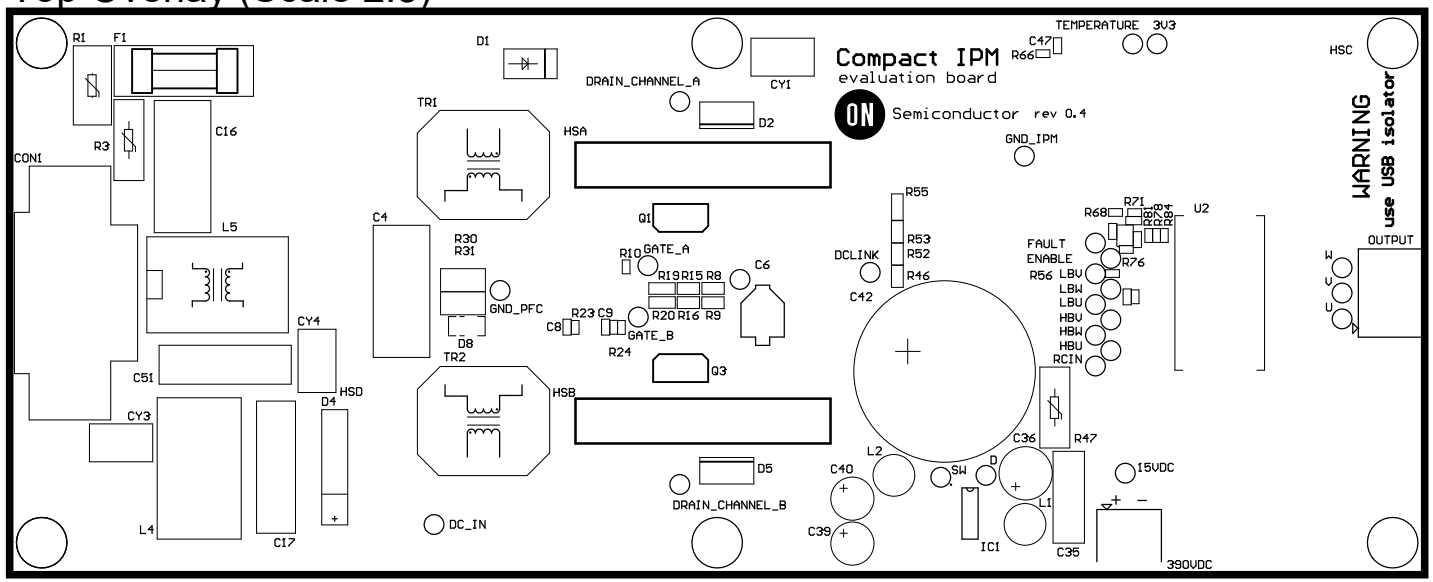
Total thickness: 1.6060mm(63.229mil)

Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Layer stack details		Fabrication document	Sheet 2 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			



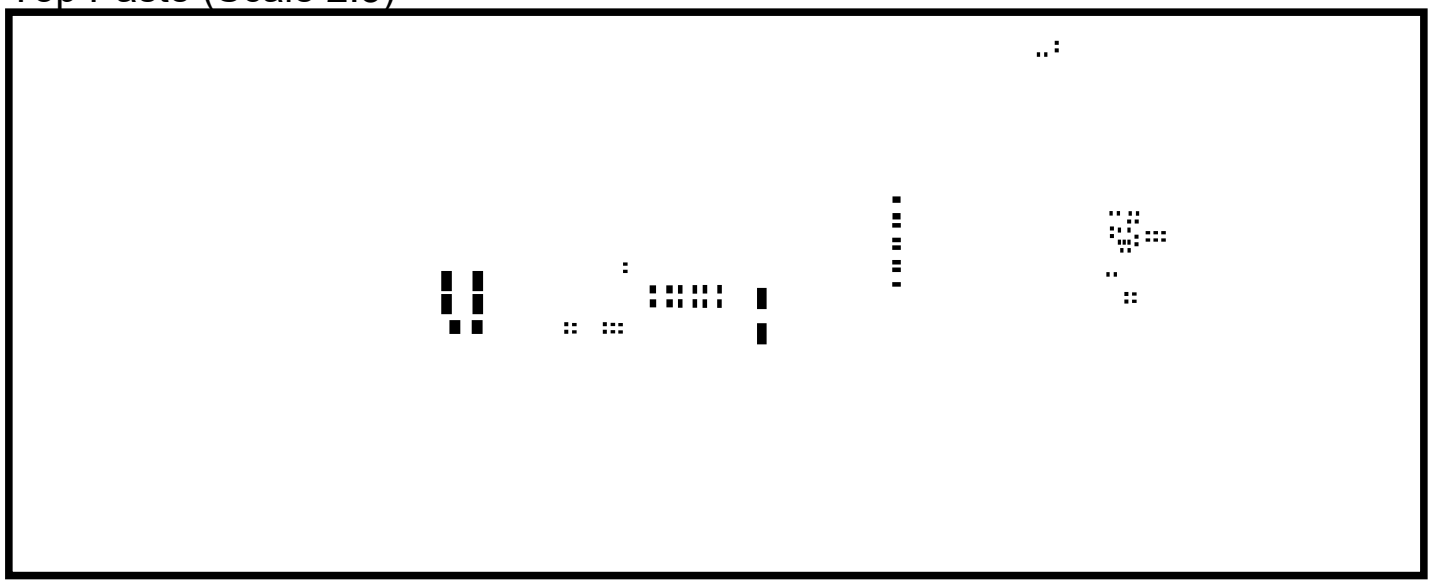
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Board outline definition - top view 2:3		Fabrication document	Sheet 3 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Top Overlay (Scale 2:3)



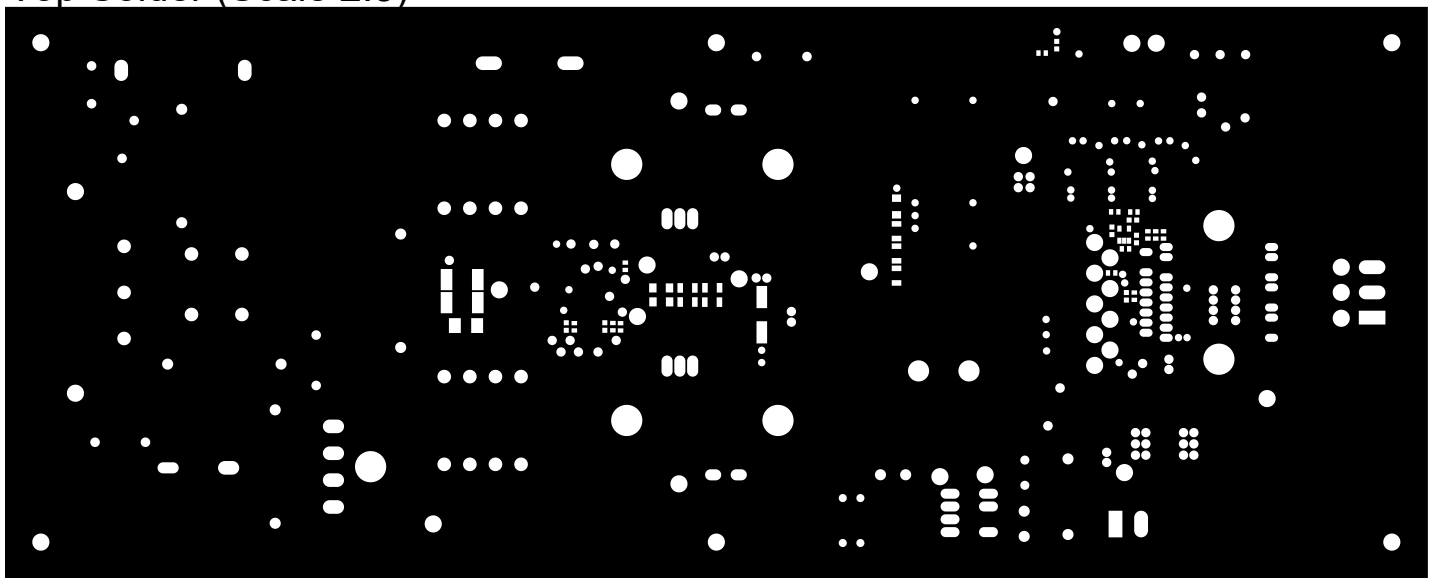
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Top side silkscreen		Fabrication document	Sheet 4 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Top Paste (Scale 2:3)



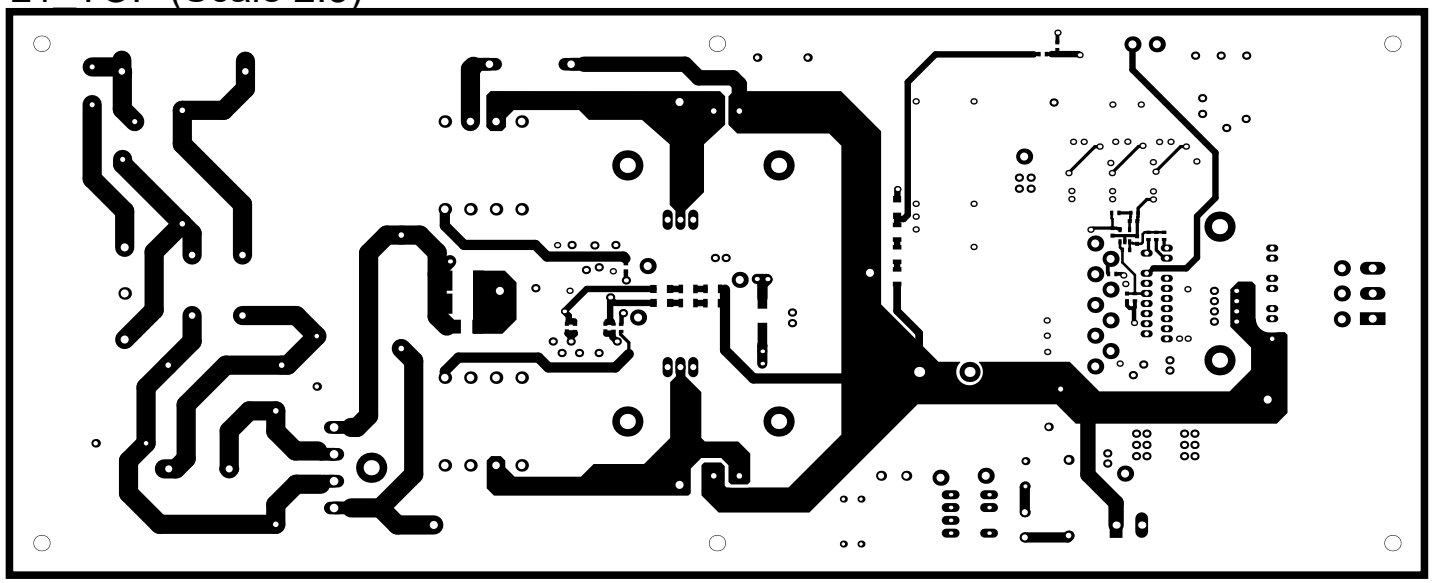
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Top side solder paste		Fabrication document	Sheet 5 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Top Solder (Scale 2:3)



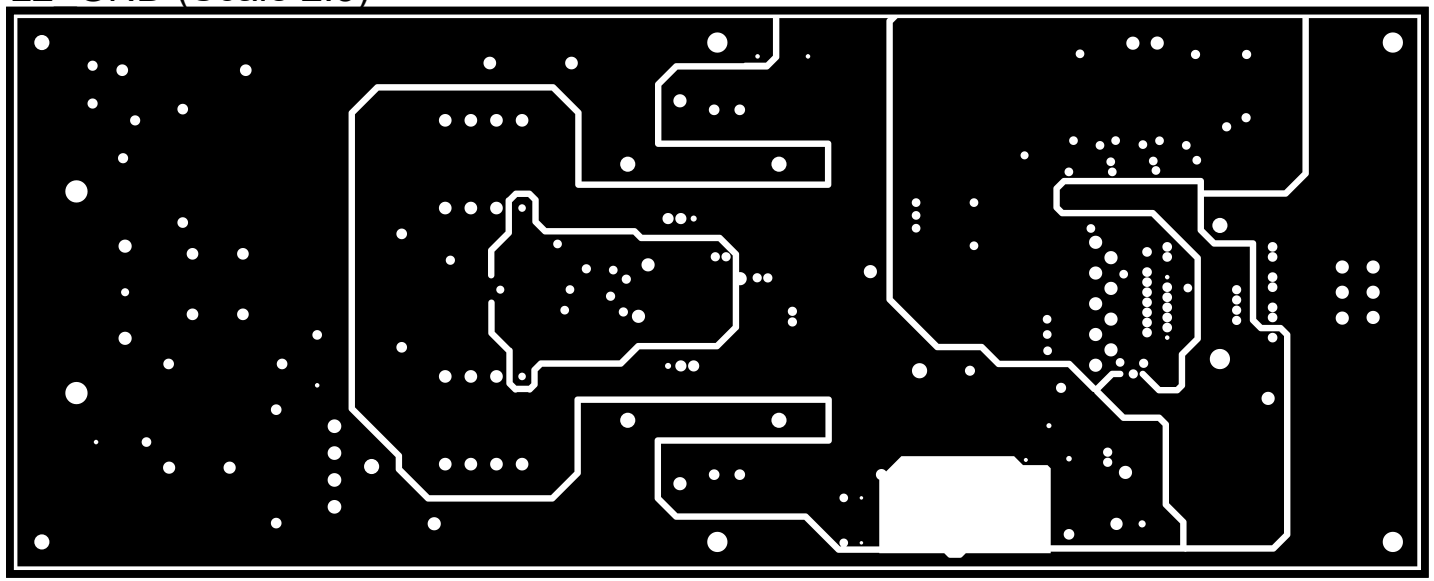
Inteligent Power Module Demo board - 850W		Revision: 0.4	State: released
Top side solder mask		Fabrication document	Sheet 6 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

L1_TOP (Scale 2:3)



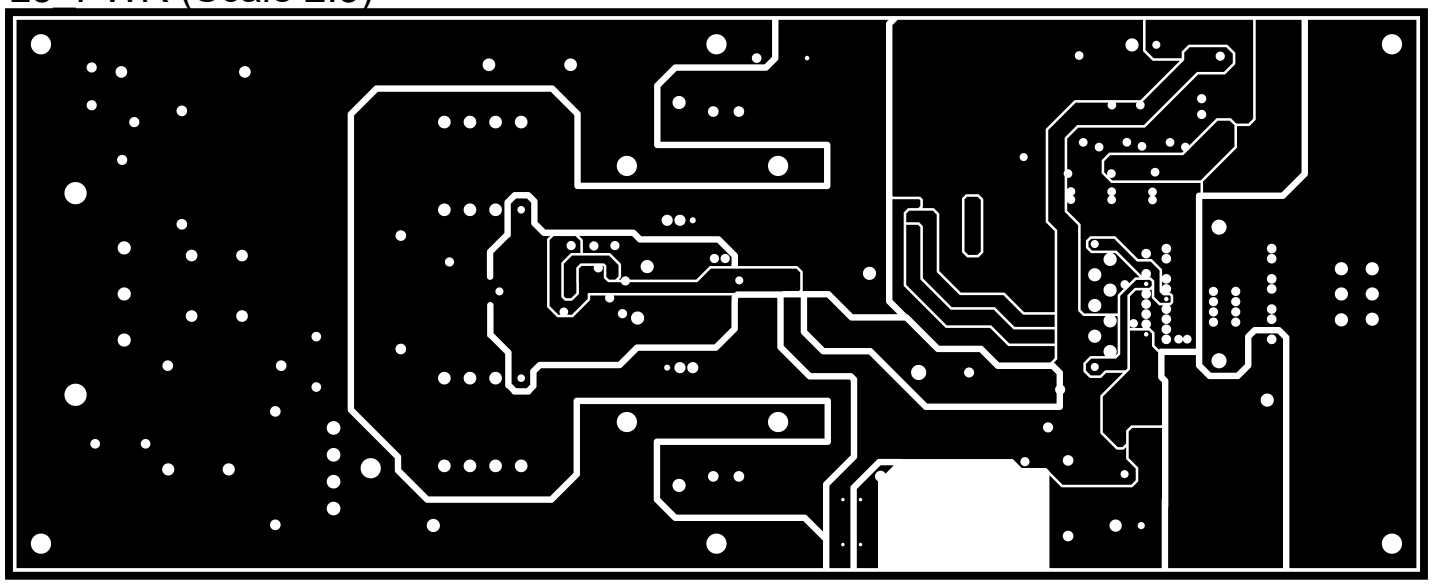
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Layer L1_Top		Fabrication document	Sheet 7 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

L2_GND (Scale 2:3)



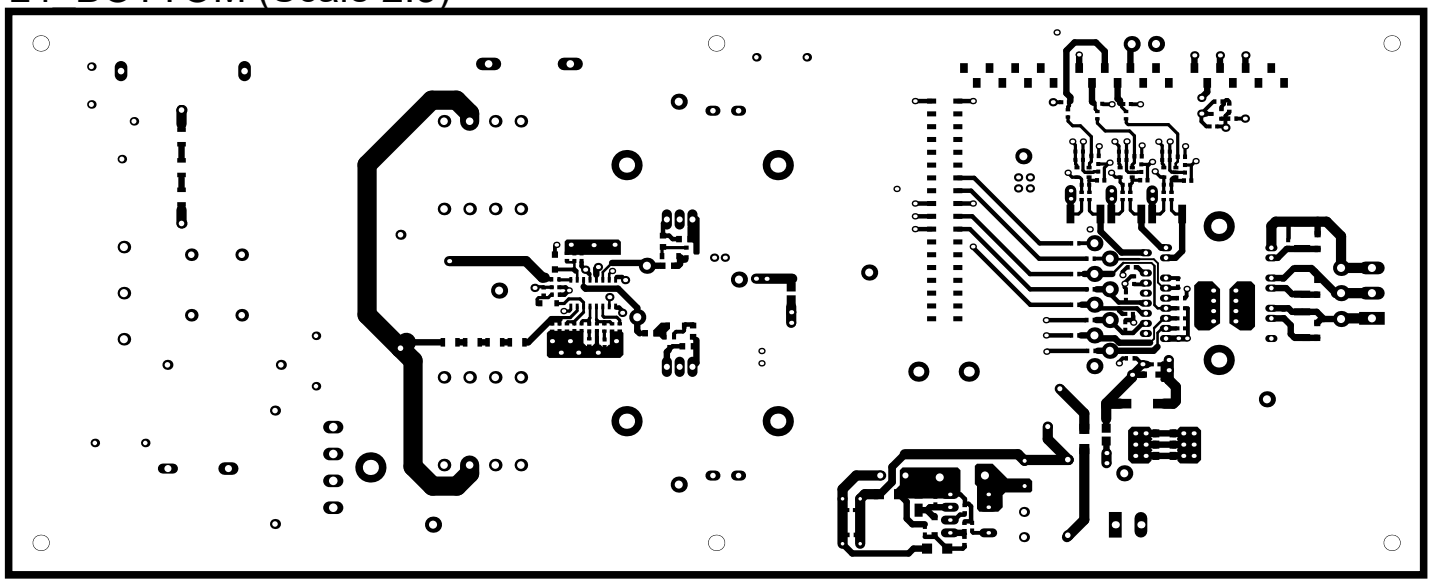
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Internal power plane L2_GND		Fabrication document	Sheet 8 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

L3_PWR (Scale 2:3)



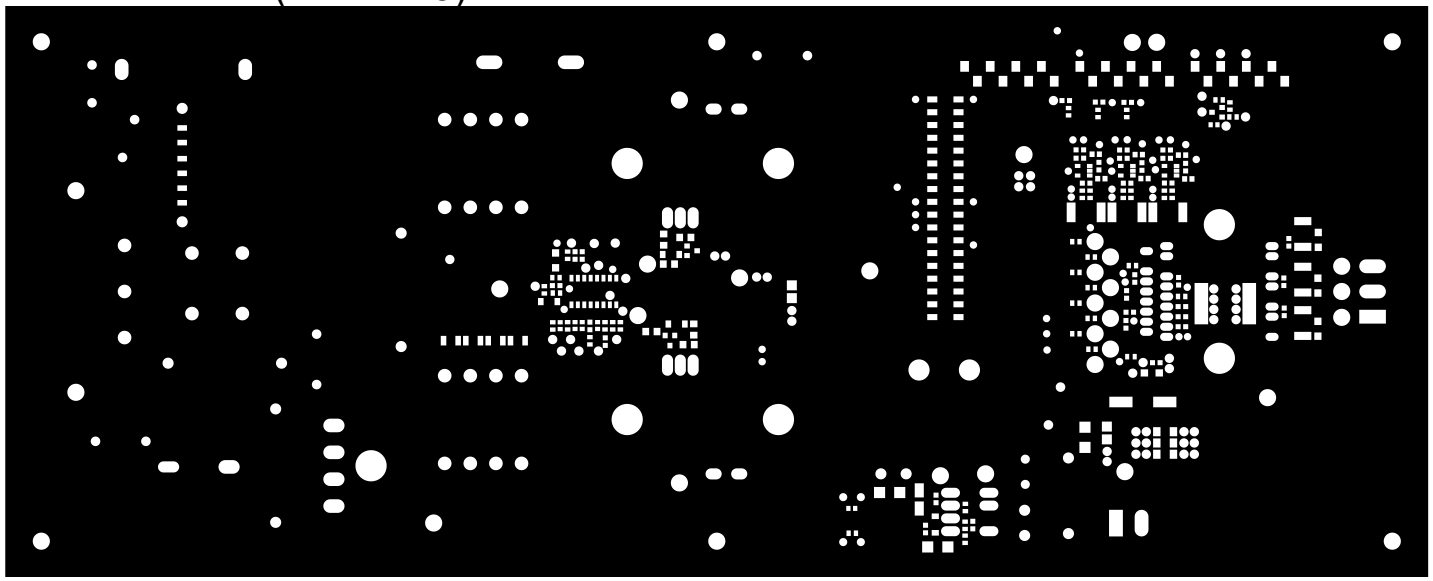
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Internal power plane layer L3_PWR		Fabrication document	Sheet 9 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

L4 BOTTOM (Scale 2:3)



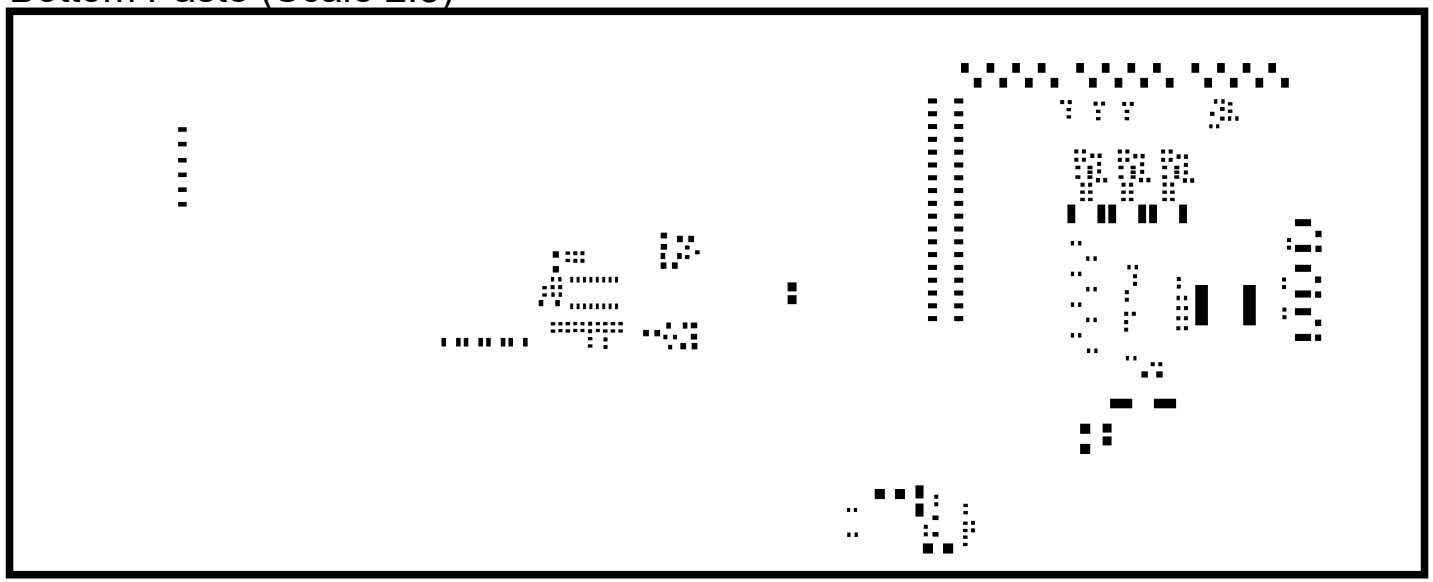
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Layer L4_BOTTOM		Fabrication document	Sheet 10 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Bottom Solder (Scale 2:3)



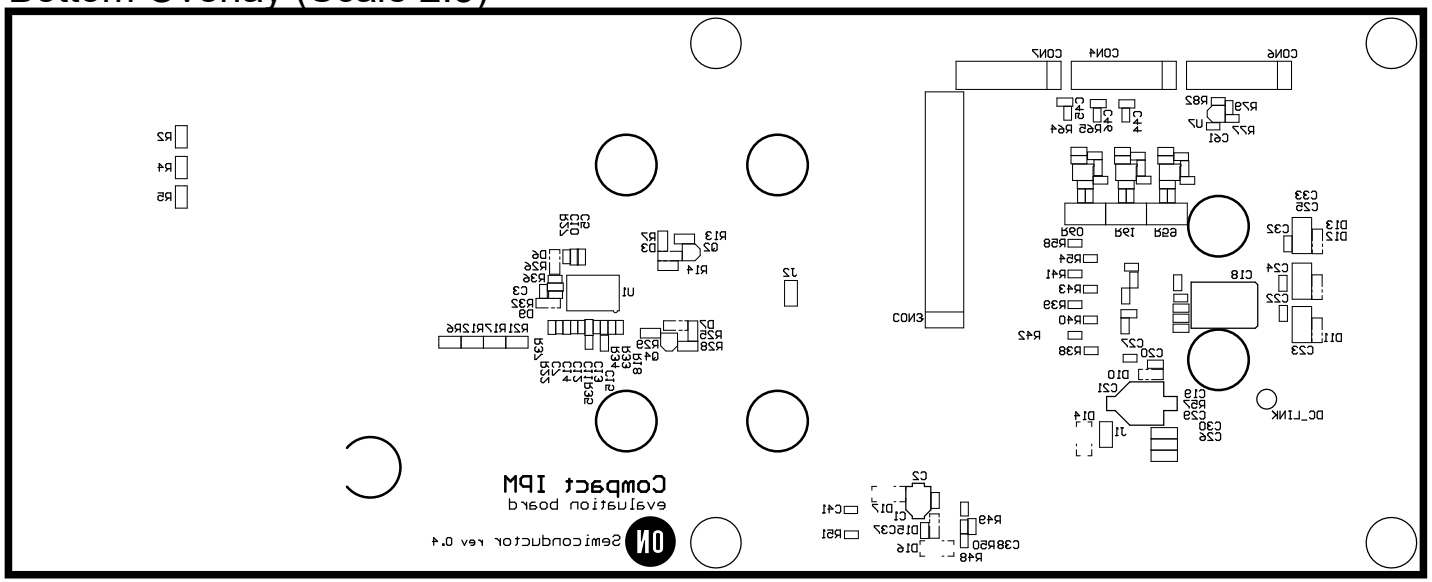
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Bottom side solder mask		Fabrication document	Sheet 11 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Bottom Paste (Scale 2:3)



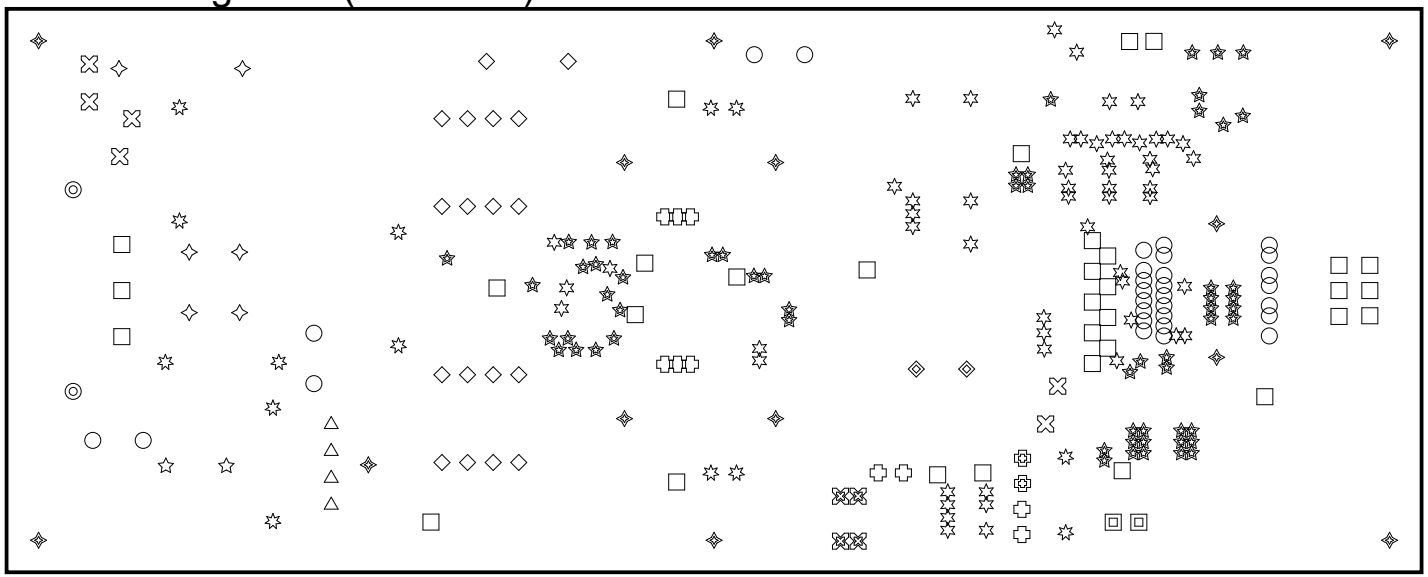
Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Bottom side solder paste		Fabrication document	Sheet 12 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Bottom Overlay (Scale 2:3)



Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Bottom side silkscreen		Fabrication document	Sheet 13 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			

Drill Drawing View (Scale 2:3)



Drill Table

Symbol	Count	Hole Size	Plated	Via / Pad	Template
	4	0.700mm(28mil)	Plated	Pad	c140h70
	57	0.711mm(28mil)	Plated	(Mixed)	(Mixed)
	2	0.800mm(31mil)	Plated	Pad	c160h80
	60	0.813mm(32mil)	Plated	Via	v165h81
	30	0.900mm(35mil)	Plated	Pad	(Mixed)
	6	1.000mm(39mil)	Plated	Pad	c170h100
	14	1.100mm(43mil)	Plated	Pad	(Mixed)
	10	1.200mm(47mil)	Plated	Pad	(Mixed)
	6	1.300mm(51mil)	Plated	Pad	(Mixed)
	2	1.400mm(55mil)	Plated	Pad	(Mixed)
	2	1.422mm(56mil)	Plated	Pad	(Mixed)
	18	1.500mm(59mil)	Plated	Pad	(Mixed)
	33	1.600mm(63mil)	Plated	Pad	(Mixed)
	4	1.700mm(67mil)	Plated	Pad	r250_400h170r100
	2	2.000mm(79mil)	Plated	Pad	c400h200
	13	3.000mm(118mil)	Plated	Pad	(Mixed)
	2	3.400mm(134mil)	Non-Plated	Pad	c152hn340
	265 Total				

Inteligent Power Module Demo board - 850W		**Revision: 0.4**	**State: released**
Drill drawing		Fabrication document	Sheet 14 / 14
Engineer: Peter Dubravka	Date: 19.Sep 2019 15:00		
PCB File: Compact_IPM_board.PcbDoc		**ON Semiconductor** Solution Engineering Center Piestany	
Repository revision: 1670			