

R24,R25 define undervoltage shutdown
 R22 - 115K-130K, defines maximal current
 Higher the resistor, higher the current

C2 - do not install

CR8 saves power by disabling DC2 when VD3 is available

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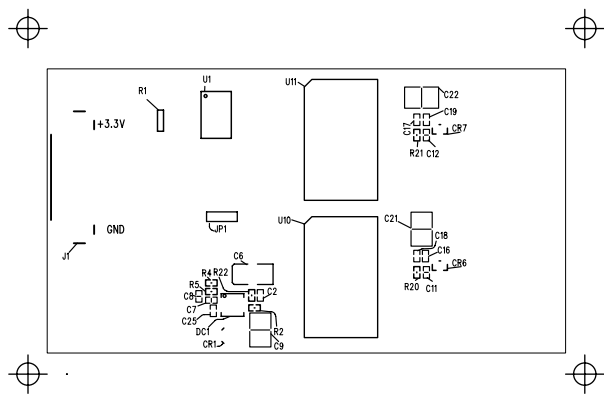
Model 363		Shutter Driver		Elphel, Inc 1 of 1 http://www.elphel.com	
NEXT ASSY		QTY 1		DESIGNED Andrey Filippov	
USED		REV A ECN #		DRAWN Andrey Filippov	
FILE 10368A		80368		DATE 08/29/2007	
		DATE 10/13/2007		PRINTED 10/13/2007 11:24:38 PM	



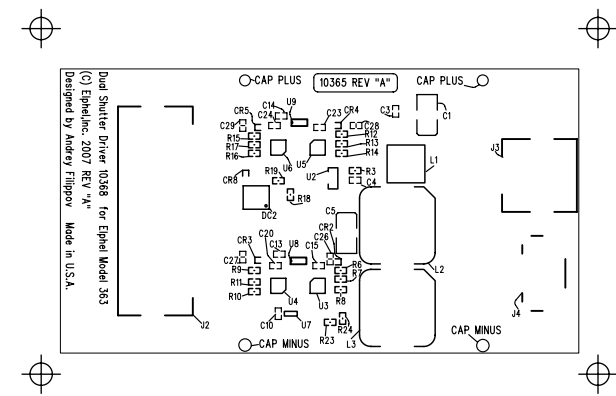
SUB-ASSEMBLY														
USAGE	#		NO.			4A20368	RELEASE DATE	10/13/07	P/L	REV.	REV.	Units to	Total	Cost per
			TITLE			Model 363 Shutter Driver	JOB#	N/A	8/29/2007	A	#####	1	\$70.96	\$70.96
			# TO	MFGR		1	WORK ORDER #	N/A						
			NEXT	ASSY		4A-?????	NON STANDARD							
							NOTATIONS							
DESIGNATOR	ITEM	QTY	EXT	STK	ROHS		PART	MANUFAC	VENDOR	VENDOR	PURCH	UNIT	TOTAL	NEW
NUMBER	#	REQ	QTY	CHK		DESCRIPTION	#	TURER	VENDOR	PART #	QTY	PRICE	TOTAL	STOCK
Related Documents														
	0.5	1	1			Schematic 10368a (80368), Model 363	1D20368 Rev.A	Designed by Andrey Filippov						
	20	1	1			Fabrication (80368), Model 363	4F20368 Rev.A							
	21	1	1			Artwork (80368), Model 363	4G20368 Rev.A							
Integrated Circuits														
U2	40	1	1		Y	3-pin Supply Voltage Supervisor, 2.64V , SOT-23-123	TPS3809L30DBV R	Texas Instruments	Digi-Key	296-10917-1-ND	1	0.96	0.96	0
U1	41	1	1		Y	Octal Scmitt Trigger Inverter/Line Drivers with 3-state outputs, 3.3V , SSOP-20	74HC7540DB	NXP Semiconductors	Digi-Key	568-2740-5-ND	1	1.27	1.27	0
U10-U11	42	2	2		Y	DMOS Dual Full Bridge Driver, MO-166	L6225PD	STMicroelectronics	Digi-Key	497-1431-5-ND	2	7.94	15.88	0
U8-U9	43	2	2		Y	Dual Buffer/Driver with Open-Drain Outputs, SC-70-6, marked as CV	SN74LVC2G07DC KR	Texas Instruments	Digi-Key	296-13495-1-ND	2	0.4	0.8	0
U3-U6	44	4	4		Y	Quad 2 Input Nor, QFN-14, marked as HA02	SN74AHC02RGY R	Texas Instruments	Digi-Key	296-13894-1-ND	4	0.6	2.4	0
U7	45	1	1		Y	Single 2-NAND Gate, SOT-553, marked as AA	SN74AHC1G00D RLR	Texas Instruments	Digi-Key	296-19780-1-ND	1000	0	0	999
Power Supply Modules														
DC2	46	1	1		Y	3-terminal Adjustable Regulator, 200mA , TSSOP-8, marked as T317	TL317CPWR	Texas Instruments	Digi-Key	296-13351-1-ND	1	0.46	0.46	0
DC1	47	1	1		Y	DC/DC converter with Soft-Start and Synchronization, 2A , DFN-8, marked as LCXY	LT3580EDD#PBF	Linear Technology	Linear Technology		1	2.86	2.86	0
Diodes														
CR6-CR7	48	2	2		Y	Shottky Diode, Series, 30V, 200mA, 200mW , SOT-323, marked as KL8	BAT54SW-7-F	Diodes Inc	Digi-Key	BAT54SW-FDICT-ND	2	0.81	1.62	0
CR2-CR5, CR8	49	5	5		Y	Shottky Diode, 30V, 200mA , SOD-523, marked as LM	SDM20U30-7	Diodes Inc	Digi-Key	SDM20U30DICT-ND	5	0.81	4.05	0

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NUMBER	#	REQ	QTY	CHK		DESCRIPTION	#	TURER	VENDOR	PART #	QTY	PRICE		STOCK
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CR1	50	1	1		Y	Shottky Diode, 40V, 1A , DO-216	UPS140E3	Microsemi	Digi-Key	UPS140E3CT-ND	1	1	1	0
						Resistors								
R7-R8, R10-R11, R13-R14, R16-R17, R20-R21	51	10	10		Y	Resistor, 100Ω, ±1% , SMD 0402, marked as 1000	9C0402FR-07100RL	Yageo	Digi-Key	311-100LRCT-ND	10	0.094	0.94	0
R3, R18-R19	52	3	3		Y	Resistor, 4.99KΩ, ±1% , SMD 0402, marked as 4991	ERJ-2RKF4991X	Panasonic	Digi-Key	P4.99KLCT-ND	10	0.098	0.98	7
R5, R23-R24	53	3	3		Y	Resistor, 10KΩ, ±1% , SMD 0402, marked as 1002	RC0402FR-0710KL	Yageo	Digi-Key	311-10.0KLRCT-ND	10	0.094	0.94	7
R6, R9, R12, R15	54	4	4		Y	Resistor, 49.9KΩ, ±1% , SMD 0402, marked as 4992	RC0402FR-0749K9L	Yageo	Digi-Key	311-49.9KLRCT-ND	10	0.094	0.94	6
R2	55	1	1		Y	Resistor, 121KΩ, ±1% , SMD 0402, marked as 1213	RC0402FR-07121KL	Yageo	Digi-Key	311-121KLRCT-ND	10	0.094	0.94	9
R22	56	1	1		Y	Resistor, 127KΩ, ±1% , SMD 0402, marked as 1273	RC0402FR-07127KL	Yageo	Digi-Key	311-127KLRCT-ND	10	0.094	0.94	9
R4	57	1	1		Y	Resistor, 324KΩ, ±1% , SMD 0402, marked as 3243	ERJ-2RKF3243X	Panasonic	Digi-Key	P324KLCT-ND	10	0.098	0.98	9
R1	58	1	1		Y	Resistor, 10KΩ , EXB-E103, marked as 103	EXB-E10C103J	Panasonic	Digi-Key	U8103CT-ND	1	0.42	0.42	0
						Capacitors								
C1, C5-C6	59	3	3		Y	Low ESR Tantalum Chip Capacitor with Polymer Electrode, 100μF, 4V , SMD B	TCJB107M004R070	AVX Corporation	Digi-Key	478-3129-1-ND	3	1.1	3.3	0
C2-C4, C10, C13-C20, C23-C25	60	15	15		Y	Capacitor, Ceramic Chip, 0.1μF, 10V , C-0402D	C0402C104K8PACTU	Kemet	Digi-Key	399-3027-1-ND	15	0.083	1.245	0
C11-C12, C26-C29	61	6	6		Y	Capacitor, Ceramic Chip, 0.01μF, 25V , C-0402	C0402C103K3RACTU	Kemet	Digi-Key	399-1278-1-ND	10	0.055	0.55	4
C30-C31	62	2	2		Y	Aluminum Electrolytic Capacitor, miniature, 105C, 1000μF, 40V , AXIAL30X15	222213817102	Vishay	Digi-Key	4232PHBK-ND	2	0	0	0
C7	63	1	1		Y	Capacitor, Ceramic Chip, 47pF, 50V , C-0402	ECJ-0EC1H470J	Panasonic	Digi-Key	PCC470CQCT-ND	10	0.026	0.26	9
C8	64	1	1		Y	Capacitor, Ceramic Chip, 4.7nF, 50V , C-0402	GRM155R71H472KA01D	Murata	Digi-Key	490-1308-1-ND	10	0.032	0.32	9
C9, C21-C22	65	3	3		Y	Capacitor, Ceramic Chip, 10μF, 50V , C-1210	GRM32DF51H106ZA01L	Murata	Digi-Key	490-1891-1-ND	10	1.124	11.24	7
						Inductors and LC filters								
L2-L3	66	2	2		Y	SMD Inductor, 10mm x 10.2mm x 3.8mm, 33μHn, 2.3A , CDRH104R	CDRH104RNP-330NC	Sumida	Digi-Key	308-1433-1-ND	2	2.45	4.9	0
L1	67	1	1		Y	SMD Common Mode Choke, 350Unknown inductance units - "OHM" , 2A, DLW5BSN351SQ2L	DLW5BSN351SQ2L	Murata	Digi-Key	490-1071-1-ND	1	0	0	0
						Connectors								

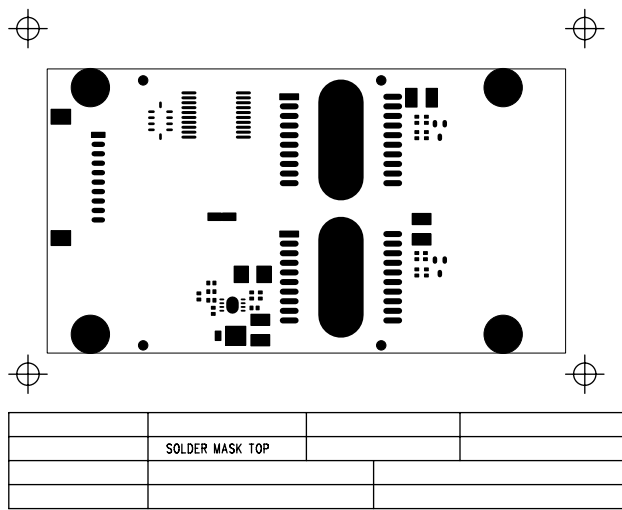
DESIGNATOR	ITEM	QTY	EXT	STK	ROHS		PART	MANUFAC		VENDOR	PURCH	UNIT		NEW
NUMBER	#	REQ	QTY	CHK		DESCRIPTION	#	TURER	VENDOR	PART #	QTY	PRICE	TOTAL	STOCK
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J11	68	1	1		Y	1.25mm Pitch Super Low profile Crimping Connector, 10 pos., Crimp Socket, 150V, 1A , DF1410S125C	DF14-10S-1.25C	Hirose	Digi-Key	H1571-ND	1	0.51	0.51	0
J1	69	1	1		Y	1.25mm Pitch Super Low profile Crimping Connector, 2 pins, Right angle SMT header, 10 contacts, 150V, 1A , DF14A10P125H	DF14A-10P-1.25H-55	Hirose	Digi-Key	H10329-ND	1	1.69	1.69	0
J4	70	1	1		Y	1.25mm Pitch Super Low profile Crimping Connector, 2 pins, Right angle SMT header, 4 contacts, 150V, 1A , DF14A4P125H	DF14A-4P-1.25H-55	Hirose	Digi-Key	H10343-ND	1	1.48	1.48	0
J41	71	1	1		Y	1.25mm Pitch Super Low profile Crimping Connector, 4 pos., Crimp Socket, 150V, 1A , DF144S125C	DF14-4S-1.25C	Hirose	Digi-Key	H1565-ND	1	0.51	0.51	0
J2	72	1	1		Y	Connector header, Micro-Fit 3.0, SMT, Right-Angle, 8 contacts, 250V, 5A , 43650-0813	43650-0813	Molex	Digi-Key	WM2466-ND	1	5.8	5.8	0
J21	73	1	1		Y	Connector receptacle Micro-Fit 3.0, Crimp Housing, 8 contacts, 250V, 5A , 43645-0800	43645-0800	Molex	Digi-Key	WM2406-ND	1	0.77	0.77	0
						Sockets and Matching Parts								
XJ11, XJ41	74	14	14			1.25mm Pitch Super Low profile Crimping Connector, 26-28AWG Crimp Gold Terminal, DF142628SCFA	DF14-2628SCFA	Hirose	Digi-Key		0	0	0	-14
XJ21	75	8	8			Connector Terminal, Micro-Fit 3.0, Female, 20-24AWG, Gold, 43030-0002	43030-0002	Molex	Digi-Key		0	0	0	-8

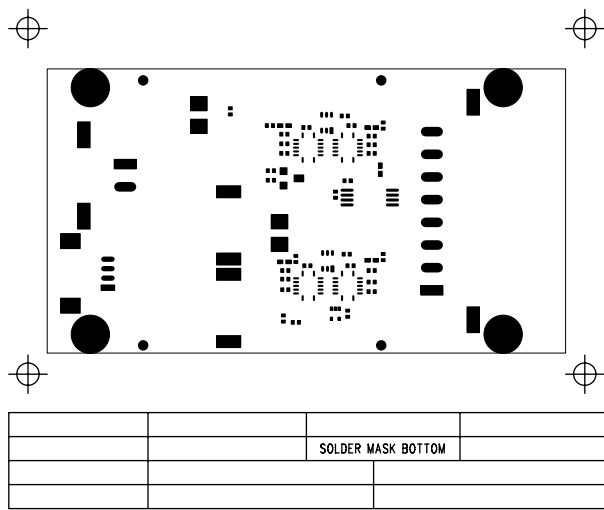


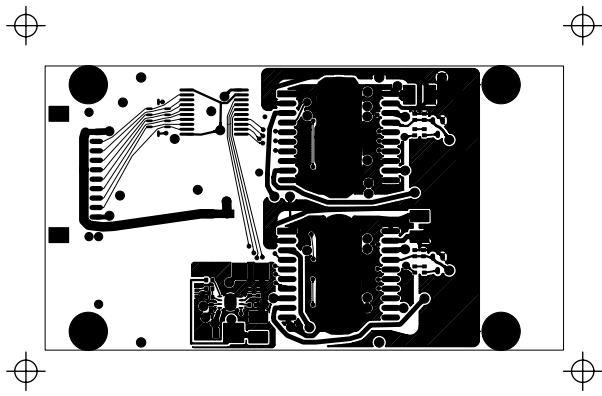
SILKSCREEN TOP			



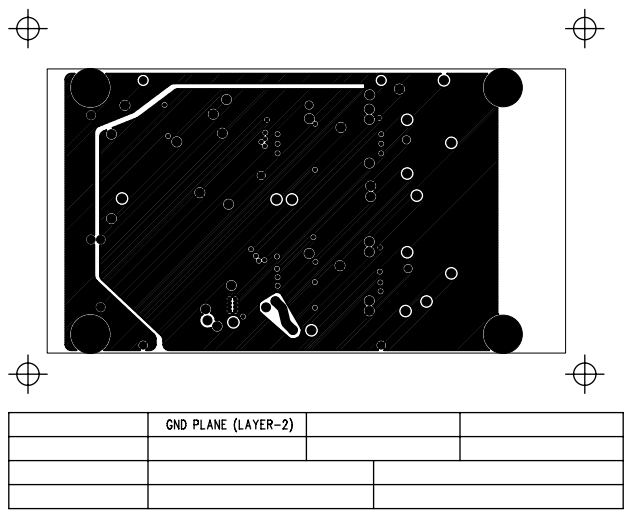
SILKSCREEN BOTTOM

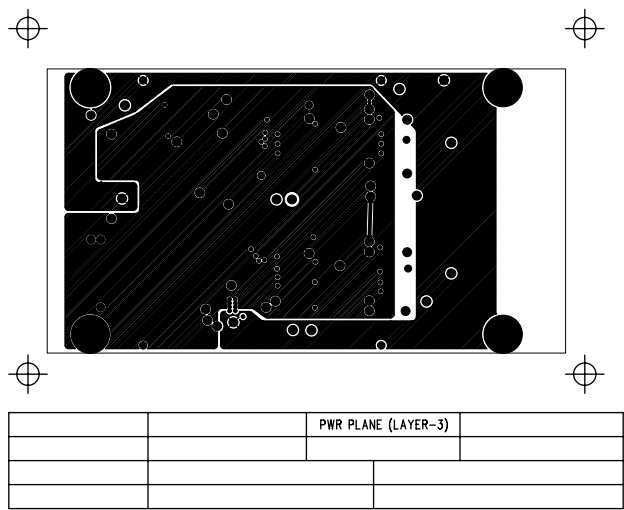




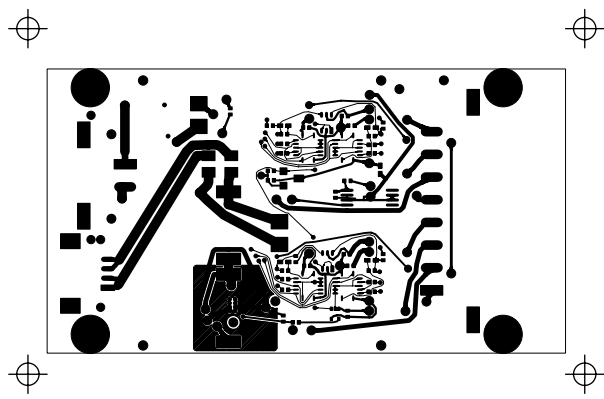


TOP SIDE (LAYER-1)			
	COMPONENT COPPER TOP (L-18)		

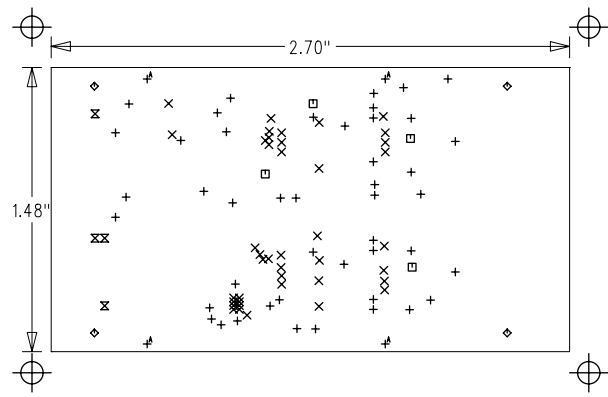




		PWR PLANE (LAYER-3)	



			BOTTOM SIDE (LAYER-4)
			COMPONENT COPPER BOTTOM (L-19)



DRILL DRAWING			

SIZE	QTY	SYM	PLTD
32	45	+	PLTD
10	41	X	PLTD
22	4	□	PLTD
87	4	◇	NPLTD
43.31	4	⊠	NPLTD
35.43	4	A	PLTD

