

ISL6568EVAL1 REV C

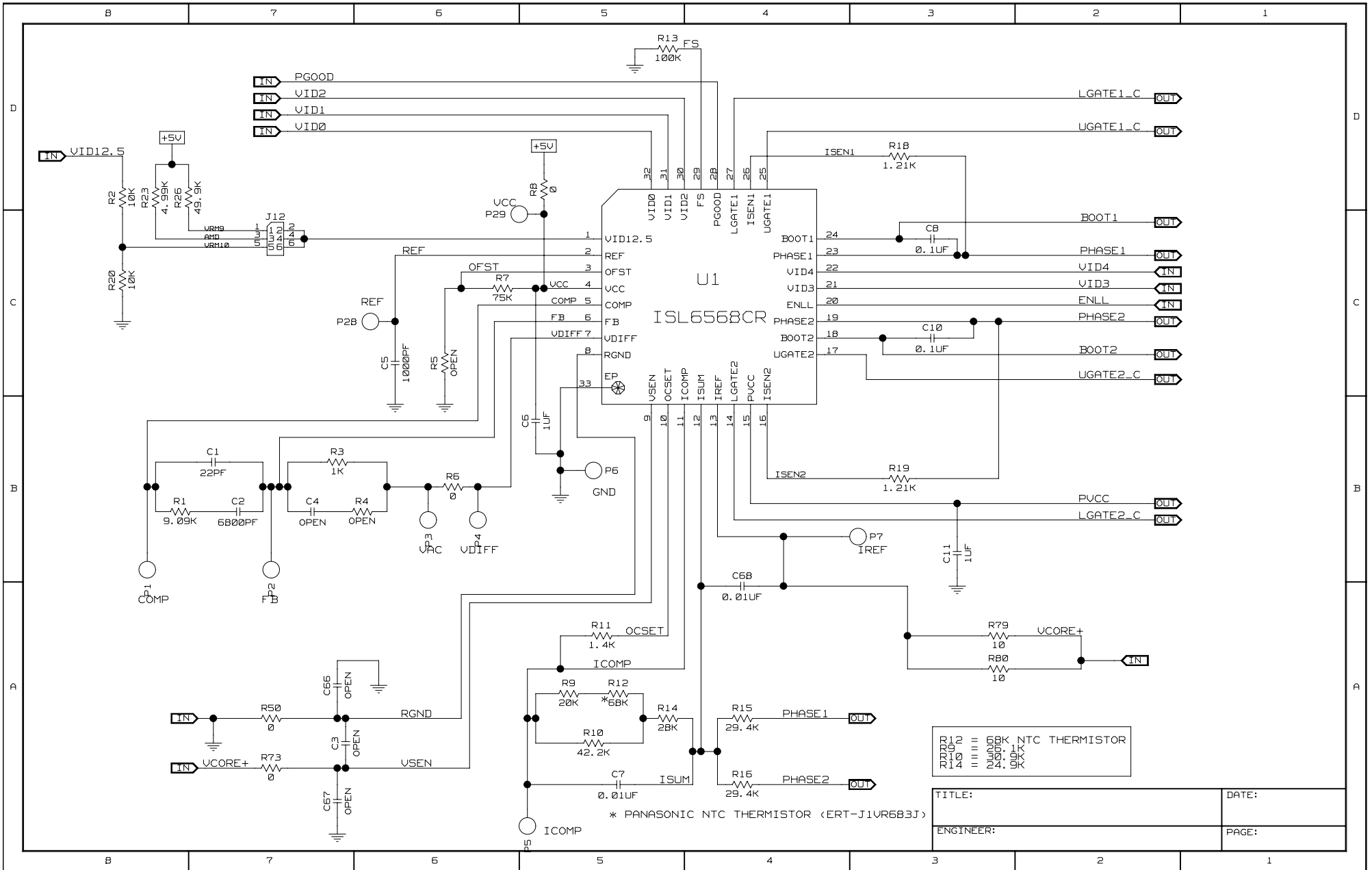
ISL6568 EVALUATION BOARD

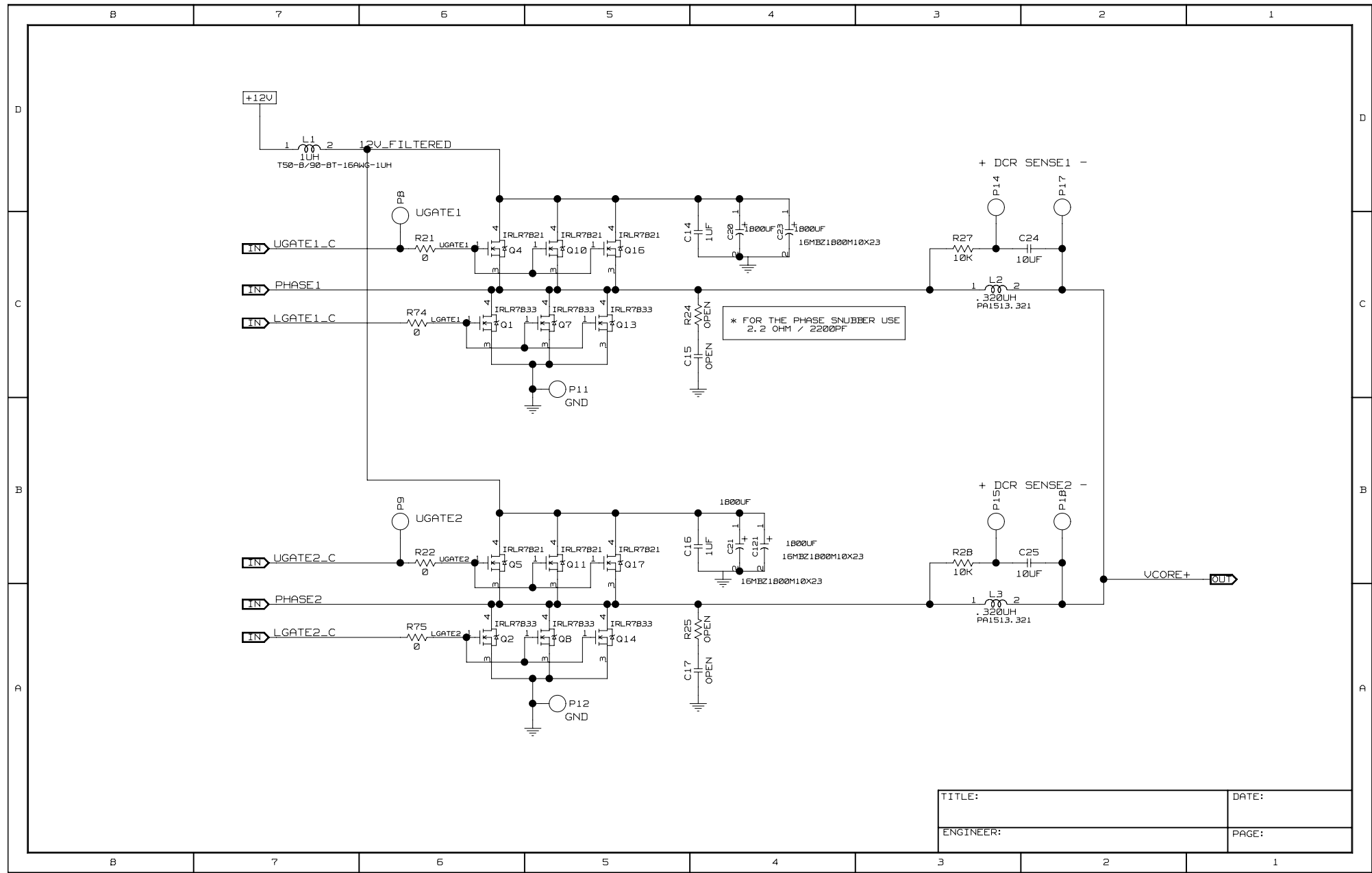
DYNAMIC VID GENERATION CIRCUIT INCLUDED
LOAD TRANSIENT GENERATOR CIRCUIT INCLUDED

BOARD FEATURES

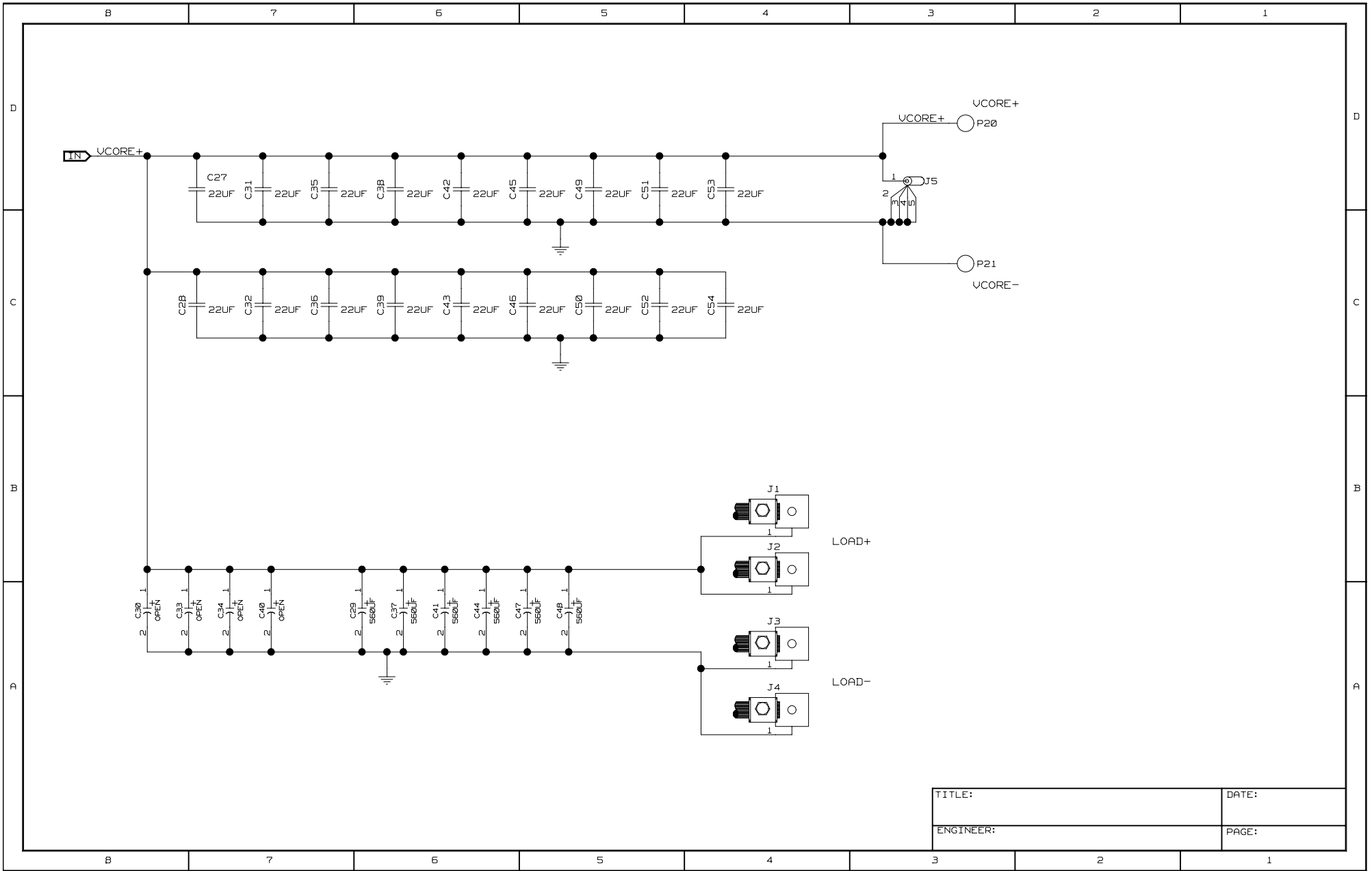
- * 12V INPUT FOR POWER STAGE
- * 2-PHASE OPERATION
- * NTC COMPENSATION NETWORK OPTION
- * LOAD TRANSIENT GENERATOR CIRCUIT INCLUDED
- * ADJUSTABLE PVCC VOLTAGE FROM 5V-12V
- * DYNAMIC VID CIRCUIT INCLUDED
- * 70A CURRENT CAPABILITY
- * DYNAMIC VID GENERATION CIRCUIT INCLUDED

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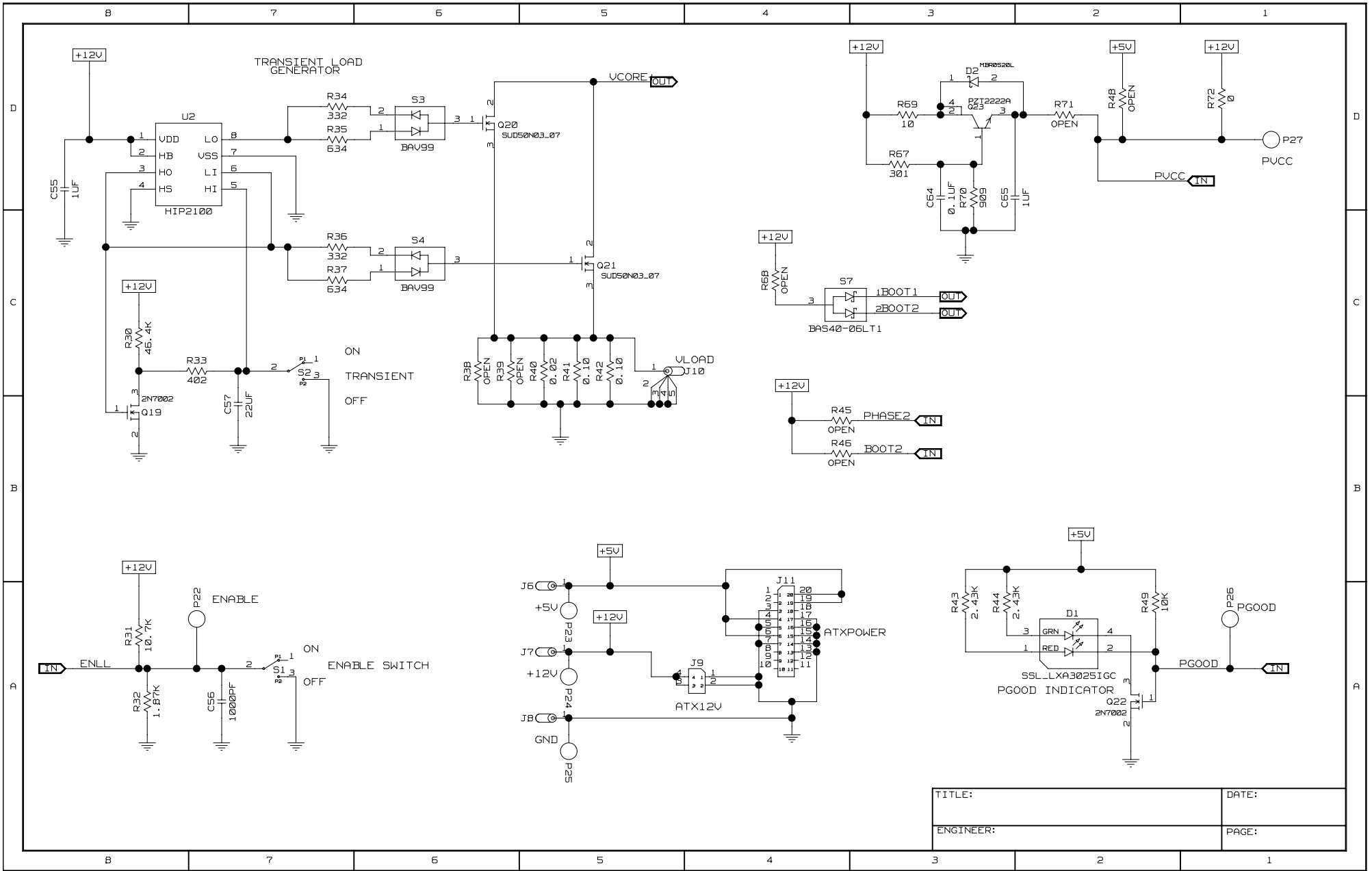




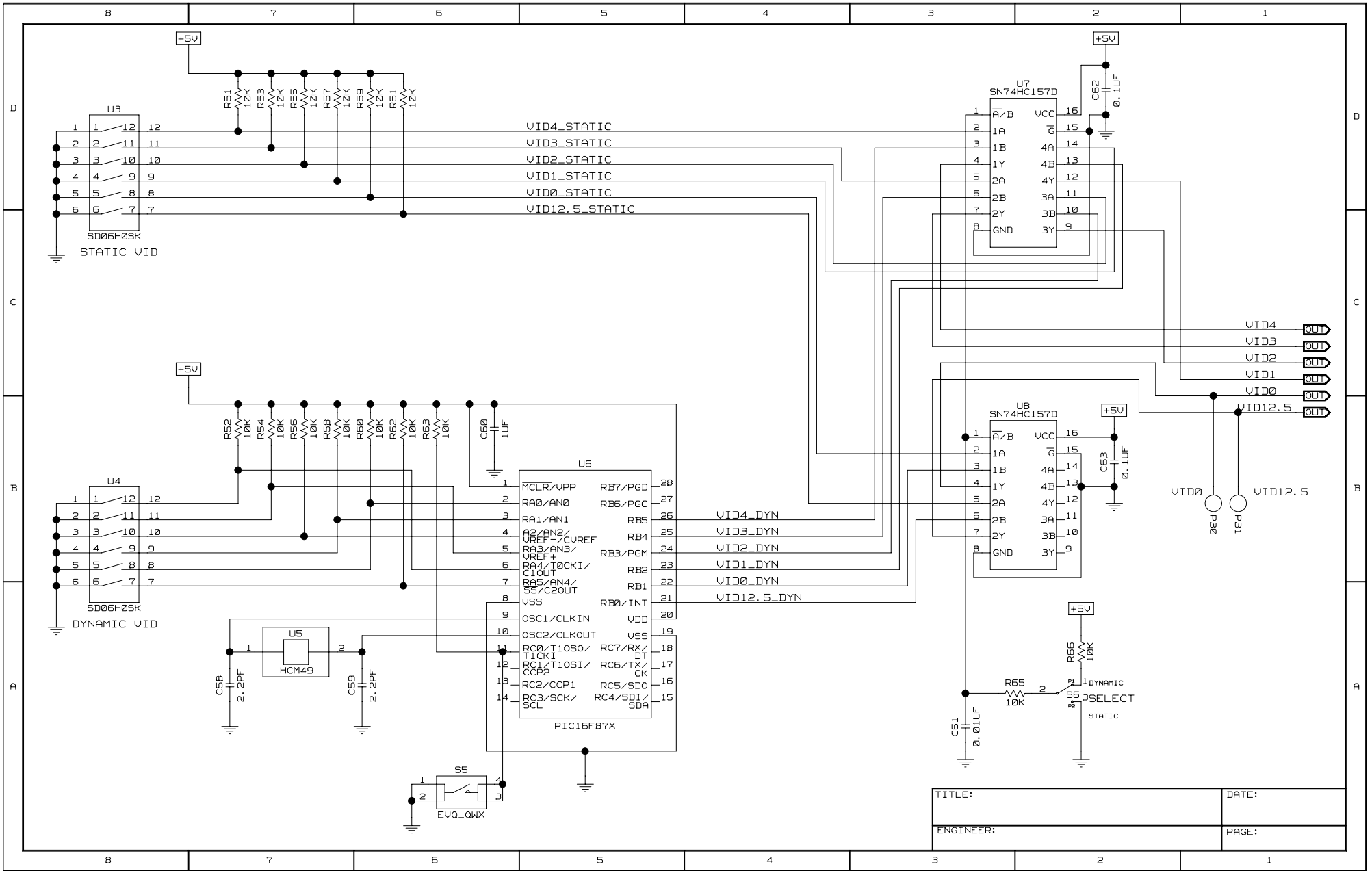
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Bill of Material

Top Layer Components

Qty	Reference	Value	Description	Vendor	Part No.	Package
1	C1	22pF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
1	C2	6800pF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
3	C3, C66, C67	OPEN	Capacitor, Ceramic	Various		0603
1	C4	OPEN	Capacitor, Ceramic	Various		0805
1	C5	1000pF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
2	C6, C11	1.0μF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
1	C7	.01μF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
3	C8, C10, C64	0.1μF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
4	C14, C16, C55, C65	1.0μF	Capacitor, Ceramic, 16V, X7R, 10%	Various		1206
2	C15, C17	OPEN	Capacitor, Ceramic	Various		0805
4	C20, C21, C23, C121	1800μF	Capacitor, AL Electrolytic, 16V	Rubycon	16MBZ1800M10X23	Thru Hole
18	C27, C28, C31, C32, C35, C36, C38, C39, C42, C43, C45, C46, C49-C54	22μF	Capacitor, Ceramic, 6.3V, X5R, 20%	Various		1206
6	C29, C37, C41, C44, C47, C48	560μF	Capacitor, OS-CON, 4V	Sanyo	4SEPC560MX	Thru Hole
4	C30, C33, C34, C40	OPEN	Capacitor			Thru Hole
1	C57	22μF	Capacitor, Ceramic, 16V, X5R, 20%	TDK	C3225X5R1C226M	1210
1	C68	.01μF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
1	D1		Red/Green LED	Lumex	SLL-LXA3025IGC	SMT
1	D2		Schottky Diode	Fairchild	MBR0520L	SOD-123
4	J1-J4		Terminal Connector	Burndy	KPA8CTP	Solder Mount
2	J5, J10		Probe Socket	Tektronix	1314353-00	Thru Hole
2	J6-J7		Female Banana Connector, Red	Johnson Components	111-0702-001	Screw On
1	J8		Female Banana Connector, Black	Johnson Components	111-0703-001	Screw On
1	J9		2x2 Power HDR 1MTG Hole	Molex	39-29-9042	Thru Hole
1	J11		2x10 Power Conn-1MTG Pin	Molex	39-29-9203	Thru Hole
1	J12		Molex HDR 2x3 1MT Hole	Molex		Thru Hole
1	L1	1.0μH	Inductor, T50-8/90 core, 8 turns AWG16	Micrometals	T50-8/90	Thru Hole
2	L2, L3	0.320μH	Inductor, 13x13mm	Pulse	PA1513.321	Surface Mount
19	P1-P5, P7-P9, P14, P15, P17, P18, P20, P22, P26, P28, P29, P30, P31		Small Test Point	Jolo	SPCJ-123-01	Thru Hole
8	P6, P11, P12, P21, P23-P25, P27		Turret Test Point	Keystone	1514-2	Thru Hole
4	Q1, Q2, Q8, Q13		Power MOSFET	International Rectifier	IRLR7833	TO-252AA
4	Q5, Q7, Q14, Q16	OPEN	Power MOSFET			TO-252AA

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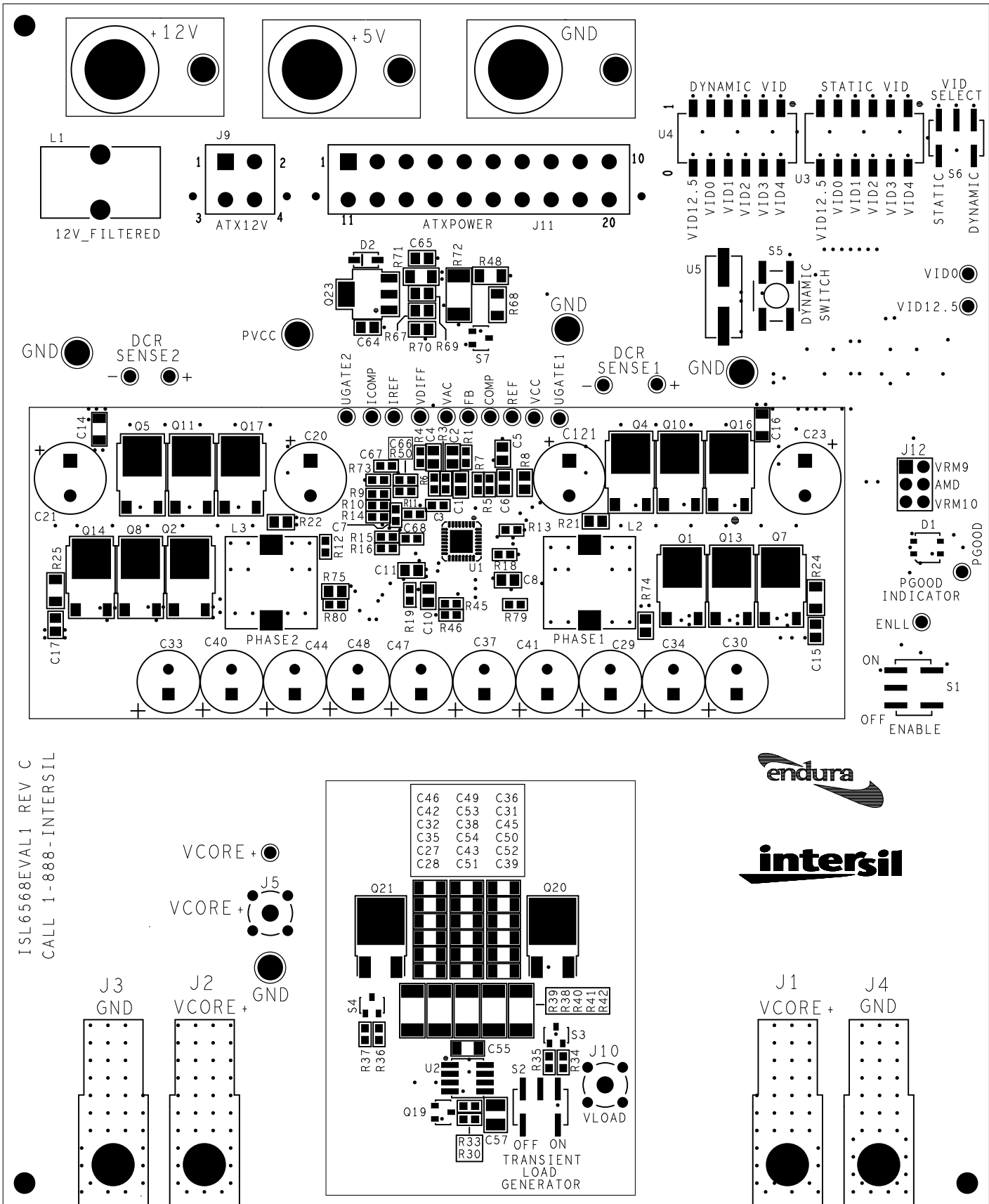
Qty	Reference	Value	Description	Vendor	Part No.	Package
4	Q4, Q10, Q11, Q17		Power MOSFET	International Rectifier	IRLR7821	TO-252AA
1	Q19		General Purpose MOSFET	Various	2N7002	SOT-23
2	Q20, Q21		Power MOSFET	Vishay	SUD50N03-07	TO-252AA
1	Q23		General Purpose NPN Transistor	Fairchild	PZT2222A	SOT-223
1	R1	9.09kΩ	Resistor, 1%, 1/16W	Various		0603
1	R3	1.0kΩ	Resistor, 1%, 1/16W	Various		0603
1	R4	OPEN	Resistor	Various		0603
1	R5	OPEN	Resistor	Various		0603
3	R6, R50, R73	0Ω	Resistor, 1%, 1/16W	Various		0603
1	R7	75.0kΩ	Resistor	Various		0603
5	R8, R21, R22, R74, R75	0Ω	Resistor, 1%, 1/10W	Various		0805
1	R9	20kΩ	Resistor, 1%, 1/16W	Various		0603
1	R10	42.2kΩ	Resistor, 1%, 1/16W	Various		0603
1	R11	1.40kΩ	Resistor, 1%, 1/16W	Various		0603
1	R12	68kΩ	NTC Thermistor	Panasonic	ERT-J1VR683J	0603
1	R13	100kΩ	Resistor, 1%, 1/16W	Various		0603
1	R14	28kΩ	Resistor, 1%, 1/16W	Various		0603
2	R15, R16	29.4kΩ	Resistor, 1%, 1/16W	Various		0603
2	R18, R19	1.21kΩ	Resistor, 1%, 1/16W	Various		0603
2	R24, R25	OPEN	Resistor, 1%, 1/8W	Various		1206
1	R30	46.4kΩ	Resistor, 1%, 1/16W	Various		0603
1	R33	402Ω	Resistor, 1%, 1/16W	Various		0603
2	R34, R36	332Ω	Resistor, 1%, 1/16W	Various		0603
2	R35, R37	634Ω	Resistor, 1%, 1/16W	Various		0603
2	R38, R39	OPEN	Thick Film Chip Resistor	Various		2512
1	R40	.020Ω	Thick Film Chip Resistor, 1%, 1W	Various		2512
2	R41, R42	.100Ω	Thick Film Chip Resistor, 1%, 1W	Various		2512
2	R45, R46	OPEN	Resistor	Various		0603
1	R48	OPEN	Resistor	Various		1206
1	R67	301Ω	Resistor, 1%, 1/10W	Various		0805
1	R68	OPEN	Resistor, 1%, 1/8W	Various		1206
1	R69	10Ω	Resistor, 1%, 1/10W	Various		0805
1	R70	909Ω	Resistor, 1%, 1/10W	Various		0805
1	R71	OPEN	Resistor, 1%, 1/8W	Various		1206
1	R72	0.0Ω	Resistor, 1%, 1/8W	Various		1206/2512
2	R79, R80	10Ω	Resistor, 1%, 1/16W	Various		0603
3	S1, S2, S6		Switch SPDT, Ultra Mini Toggle	C&K Components	GT11MSCKE	SMD
2	S3, S4		Dual Diode	Various	BAV99	SOT-23
1	S5		Momentary Pushbutton Switch	Panasonic	EVQ-QWT-03W	SMD

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Qty	Reference	Value	Description	Vendor	Part No.	Package
1	S7		Common Anode Dual Schottky Diode	On-Semiconductor	BAS40-06LT1	SOT-23
1	U1		Endura Multi-phase Controller	Intersil	ISL6568CR	MLFP-32
1	U2		MOSFET Driver IC	Intersil	HIP2100IB	SO-8
2	U3, U4		Low Profile DIP Switch, SPST, 6 Position	C&K Components	SD06H0SK	SMT
1	U5		8.00MHz Quartz Crystal	Citizen	HCM49-8.000MABJT	SMD

Bottom Layer Components

Qty	Reference	Value	Description	Vendor	Part No.	Package
2	C24, C25	10 μ F	Capacitor, Ceramic, 16V, X7R, 10%	Various		1206
1	C56	1000pF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
2	C58, C59	2.2pF	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
1	C60	1.0 μ F	Capacitor, Ceramic, 50V, X7R, 10%	Various		0805
1	C61	.01 μ F	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
2	C62, C63	0.1 μ F	Capacitor, Ceramic, 50V, X7R, 10%	Various		0603
1	Q22		General Purpose MOSFET	Various	2N7002	SOT-23
20	R2, R20, R27, R28, R49, R51-R63, R65, R66	10k Ω	Resistor, 1%, 1/16W	Various		0603
1	R23	4.99k Ω	Resistor, 1%, 1/16W	Various		0603
1	R26	49.9k Ω	Resistor, 1%, 1/16W	Various		0603
1	R31	10.7k Ω	Resistor, 1%, 1/16W	Various		0603
1	R32	1.87k Ω	Resistor, 1%, 1/16W	Various		0603
2	R43, R44	2.43k Ω	Resistor, 1%, 1/16W	Various		0603
1	U6		8-bit microcontroller	Microchip	PIC16F873A-SO	SOIC-32W
2	U7, U8		Quad 2-to-1 Line Data Selector/Multiplexer	Texas Instruments	SN74HC157D	SOIC-16



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