

PROJECT NAME:

STEVAL-ISV005V1

May 27, 2011

BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WA TT	TECNOLOGY information	PACKAGE	Manufacturer	Manufacturer Code	RS/Distelec/OTHER Code	More Info
1	4	C1, C2, C3, C4	100nF		50V			0603	MURATA	GRM188R71C104KA01		Bootstrap capacitors
2	2	C5, C11	1µF		50V			1206	MURATA	GRM31MR71H105KA88		Input Capacitor
3	1	C9	220pF		50V			0603	MURATA	GRM188R71E221KA01		Voltage Sensing Capacitor
4	1	C8	22nF		25V			0603	MURATA	GRM188R71C223KA01		Compensation capacitor
5	1	C10	220pF		50V			0603	MURATA	GRM188R71E221KA01		Voltage Sensing capacitor
6	1	C7	470nF		25V			0603	MURATA	GRM188R71A474KA61		Internal Reference Voltage capacitor
7	3	C6, C12, C13	4.7µF		50V			1210	MURATA	GRM32ER71H475KA88K		Output capacitor
8	1	D3	STPS160U		1A, 60V			SMB	ST	STPS160U		Noise Filter on Supply pin
9	1	R1	2.2MΩ					0603	VISHAY	D11/CRCW0603 2.2M 1%		Input Voltage Partitioning Resistor
10	1	R2	110kΩ					0603	VISHAY	D11/CRCW0603 110k 1%		Input Voltage Partitioning Resistor
11	1	R3	3.9MΩ					0603	VISHAY	D11/CRCW0603 4.3M 1%		output Voltage Partitioning Resistor
12	1	R4	110kΩ					0603	VISHAY	D11/CRCW0603 110k 1%		output Voltage Partitioning Resistor
13	1	R5	1kΩ					0603	VISHAY	D11/CRCW0603 1k 1%		Compensation resistor
		R6	0Ω					0603				Pull up resistor (Note: R6 must be removed if R7 is soldered)
14		R7 (optional)	Depending on desired Fsw					0603				Oscillator Resistor (Note: R6 must be removed if R7 is soldered)
15	4	L1, L2, L3, L4	47µH						EPCOS	B82477G4473M003		Phase x (x=1..4) Inductors
									COILCRAFT	MSS1278T-473ML		
									CYNTEC	P1MB136T-470MS-11		
									MURATA	49470SC		
16	2	D1, D2	SPV1001-N40		15A, 60V			MLPD5x6	ST	SPV1001-N40		Bypass Diodes
17	1	J35	SPV1020					PSS036	ST	SPV1020		STM SUPPLY
18	1	J36	4PIN Connector				PITCH-2.54mm	TRH	Phoenix Contact	1723672	R.S.2901286	
19	2	D4, D5	SMBJ36CA		600W, 40V			SMB	ST	SMBJ36CA-TR		600W, 40V unidirectional protection transistor
22	1	J37	SEA05					SOT23-6L	ST	SEA05TR		CV-CC controller
23	1	R7	2.7MΩ					0603	VISHAY	D11/CRCW0603 2.7M 1%		output Voltage Part. Resistor Note: threshold is 2.5V, so R7=2.7M, R8=0.255M=> Vmax=28.8V
24	1	R8	255kΩ					0603	VISHAY	D11/CRCW0603 255k 1%		output Voltage Part. Resistor Note: threshold is 2.5V, so R7=2.7M, R8=0.255M=> Vmax=28.8V

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25	1	R9	5mΩ					0603	CYNTEC			I-sense resistor (50mΩ=> I _{max} =1A) Note: threshold is 50mV, so R9 = 0.05/I _{max}
26	1	R10	220kΩ					0603	VISHAY	D11/CRCW0603 220k 1%		Voltage Comp. Loop Resistor
27	1	R11	22kΩ					0603	VISHAY	D11/CRCW0603 22k 1%		Current Comp. Loop Resistor
28	1	R12	4.7kΩ					0603	VISHAY	D11/CRCW0603 4.7k 1%		SEA05 protection resistor
29	1	C14	4.7nF					0603	MURATA	GRM188R71C472KA01B		Current Comp. Loop Capacitor
30	1	C15	22nF					0603	MURATA	GRM188R71C223KA01		Voltage Comp. Loop Capacitor
31	2		2PIN connector				PITCH-2.54mm	TRH	Phoenix Contact			