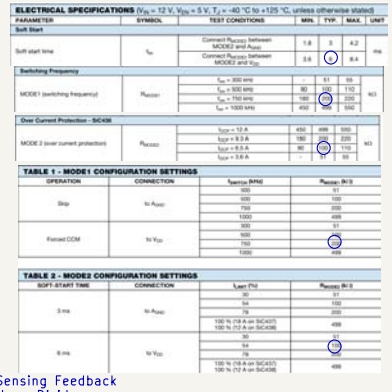
PART NUMBER	RoHS Compliant	RoHS Compatible	SWITCH FUNCTION POS.1	SWITCH FUNCTION POS.2
OS102011MS2QN1 (non-shorting)	YES	NO	ON	ON
OS102011MS2QN1C* (non-shorting)	YES	YES	ON	ON
OS102011MS2QS1 (shorting)	YES	NO	ON	ON
OS102011MS2QS1C* (shorting)	YES	YES	ON	ON
CONN. TERMINALS			1-2	2-3

SCHEMATIC

SPDT



ELECTRICAL SPECIFICATIONS (V_{IN} = 12 V, V_{DR} = 5 V, T_J = -40 °C to +125 °C, unless otherwise stated)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Soft Start						
Soft start time	t_{ss}	Connect R_{MODE2} between MODE2 and A_{GND}	1.8	3	4.2	ms
		Connect R_{MODE2} between MODE2 and V_{DD}	3.6	6	8.4	
Switching Frequency						
MODE1 (switching frequency)	R_{MODE1}	f_{sw} = 300 kHz	-	51	55	kΩ
		f_{sw} = 500 kHz	90	100	110	
		f_{sw} = 750 kHz	180	200	220	
		f_{sw} = 1000 kHz	450	499	550	
Over Current Protection - SIC438						
MODE 2 (over current protection)	R_{MODE2}	I_{OCP} = 12 A	450	499	550	kΩ
		I_{OCP} = 9.3 A	180	200	220	
		I_{OCP} = 6.5 A	90	100	110	
		I_{OCP} = 3.6 A	-	51	55	

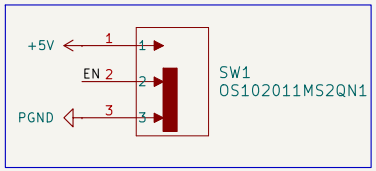
TABLE 1 - MODE1 CONFIGURATION SETTINGS

OPERATION	CONNECTION	$f_{sw(TYP)}$ (kHz)	R_{MODE1} (kΩ)
Skip	to A_{GND}	300	51
		500	100
		750	200
		1000	499
Forced CCM	to V_{DD}	300	51
		500	100
		750	200
		1000	499

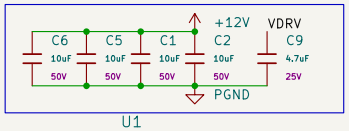
TABLE 2 - MODE2 CONFIGURATION SETTINGS

SOFT-START TIME	CONNECTION	t_{LIMIT} (%)	R_{MODE2} (kΩ)
3 ms	to A_{GND}	30	51
		54	100
		78	200
		100 % (16 A on SIC437) 120 % (12 A on SIC438)	499
6 ms	to V_{DD}	30	
		54	
		78	
		100 % (16 A on SIC437) 120 % (12 A on SIC438)	499

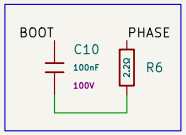
Enable Circuit
Internal 5MOhm Pull Down,
no need for external



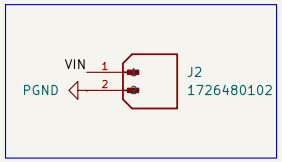
Board Side Caps



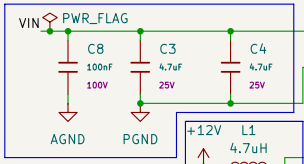
BOOT PHASE

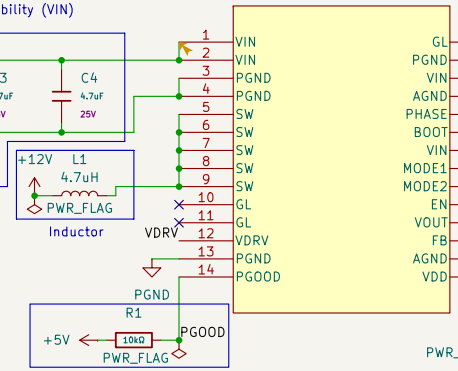


Battery Connector

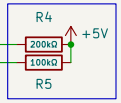


Decoupling + Stability (VIN)

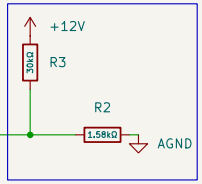




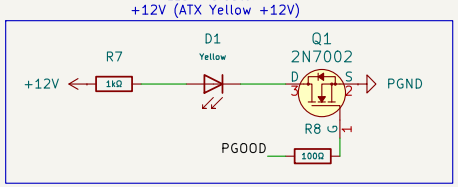
Mode Control



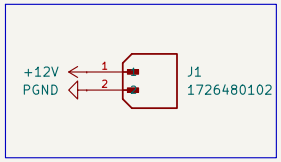
Voltage Sensing Feedback
Voltage Divider



LED Indicator
+12V (ATX Yellow +12V)



Power Connector



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