



SUPERWORLD ELECTRONICS

STL Series – 2W Single Output Surface Mount DC-DC Converter



RoHS Compliant



FEATURES

- 2W Power in smaller compact package
- Versatile SMD package
- 2kVdc isolated outputs
- Industry standard footprint and size
- Operating Temp. Range -40°C to 85°C
- CECC00802 Re-flow (280 deg. C max.)
- 2 Year Warranty

DESCRIPTION

The STL Series provides 2W of power in a smaller compact industry standard package, typically used for 1W products. Its innovative design results in a high performance solution for a wide range of applications. The product is fully encapsulated in a non-flammable plastic case (meeting UL 94V-0) and is designed to meet EN60950 and UL1950 safety standards. The devices are fully compatible with CECC00802 to 280 deg. C

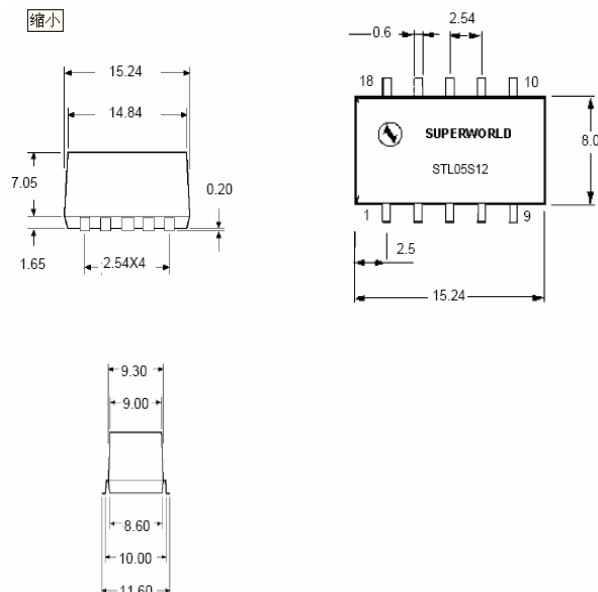
STL PRODUCT RANGE

Model	Vin (nom) (Vdc)	Vout (Vdc)	Iout (mA)	Iin (rated load) (mA)	Eff. (%)
STL03S03F	3.3	3.3	600	741	81
STL03S05F	3.3	5	400	730	83
STL03S09F	3.3	9	224	727	84
STL03S12F	3.3	12	164	702	85
STL03S15F	3.3	15	136	719	86
STL05S03F	5	3.3	600	483	82
STL05S05F	5	5	400	482	83
STL05S09F	5	9	224	480	84
STL05S12F	5	12	164	463	85
STL05S15F	5	15	136	474	86
STL09S03F	9	3.3	600	268	82
STL09S05F	9	5	400	268	83
STL09S09F	9	9	224	267	84
STL09S12F	9	12	164	257	85
STL09S15F	9	15	136	264	86
STL12S03F	12	3.3	600	201	82
STL12S05F	12	5	400	194	86
STL12S09F	12	9	224	195	86
STL12S12F	12	12	164	189	87
STL12S15F	12	15	136	195	87
STL15S03F	15	3.3	600	159	83
STL15S05F	15	5	400	155	86
STL15S09F	15	9	224	156	86
STL15S12F	15	12	164	151	87
STL15S15F	15	15	136	156	87

MECHANICAL SPECIFICATIONS

Pin	Function
1	GND
3	+Vin
5	NC
7	0V
9	NC
10	NC
12	Vout
14	NC
16	NC
18	NC

All measurements are in mm
Tolerances = $\pm 0.25\text{mm}$



STL INPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Input Current (No Load)	All models		20		mA
Voltage Range	3.3 Vin models	2.97	3.3	3.63	Vdc
	5 Vin models	4.5	5	5.5	
	9 Vin models	8.1	9	9.9	
	12 Vin models	10.8	12	13.2	
	15 Vin models	13.5	15	16.5	
Transient Input Voltage (1 sec max.)	3.3 Vin models			7.5	Vdc
	5 Vin models			7.5	
	9 Vin models			12.5	
	12 Vin models			18	
	15 Vin models			21	
Reverse Voltage Protection				0.3	A

STL OUTPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Rated Power	All models			2.0	W
Voltage Setpoint Accuracy				± 3	%
Line Regulation	1% change in Vin		1.0	1.2	%
Load Regulation (10% load to rated load)	3.3Vout & 5Vout		10	15	%
	9,12 & 15 Vout		6	12	%
Ripple & Noise	BW = DC to 10MHz		45	90	mVp-p
	BW = 10Hz to 2MHz		30		
Surge Voltage (1 sec max.)	3.3 Vout models			4.9	Vdc
	5 Vout models			7	
	9 Vout models			11.5	
	12 Vout models			15	
	15 Vout models			18	
Temperature Coefficient				± 0.02	%/ °C
Capacitive Load				10	µF
Short Circuit Protection				1	second

STL GENERAL CHARACTERISTICS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Temperature	Specification	-40		85	°C
	Storage	-55		125	°C
Isolation	Isolation Test Voltage	1000			Vdc
	Resistance	1	10		GΩ
	Capacitance		25	100	pF
	Leakage Current		2	8.5	µArms
Switching Frequency			120		kHz
MTTF (Ta = 25 °C)	MIL-HDBK-217E		450000		hrs
Weight				2.2	g

Refer to Low Power Application Note 1 for additional Performance Curves & Data

CONTACT INFORMATION

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