



STV Series – 1W 3kVdc Isolated Dual Output Surface Mount DC-DC Converter



RoHS Compliant



FEATURES

- Industry standard SMD package
- Dual High Isolated Outputs 3kVdc
- Operating Temp Range -40°C to 85°C
- Internal Input and Output Filtering
- CECC00802 Re-flow (280 deg. C max.)
- 2 Year Warranty

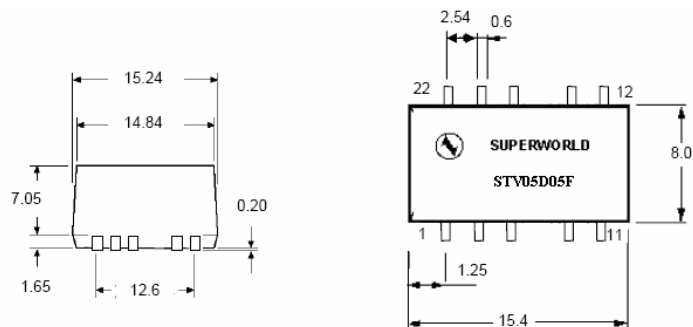
DESCRIPTION

The STV Series is a reliable high performance solution for a wide range of applications. With fully isolated dual outputs, several grounding and polarity configurations are available to the user. The STV 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

STV PRODUCT RANGE

Model	Vin (nom) (Vdc)	Vout (Vdc)	Iout (mA)	Iin (rated load) (mA)	Eff. (%)
STV03D03F	3.3	± 3.3	± 140	354	79
STV03D05F	3.3	± 5	± 100	374	81
STV03D09F	3.3	± 9	± 56	373	82
STV03D12F	3.3	± 12	± 41	359	83
STV03D15F	3.3	± 15	± 34	372	83
STV05D03F	5	± 3.3	± 140	228	81
STV05D05F	5	± 5	± 100	241	83
STV05D09F	5	± 9	± 56	240	84
STV05D12F	5	± 12	± 41	232	85
STV05D15F	5	± 15	± 34	237	86
STV09D03F	9	± 3.3	± 140	127	81
STV09D05F	9	± 5	± 100	131	85
STV09D09F	9	± 9	± 56	132	85
STV09D12F	9	± 12	± 41	127	86
STV09D15F	9	± 15	± 34	132	86
STV12D03F	12	± 3.3	± 140	93	83
STV12D05F	12	± 5	± 100	97	86
STV12D09F	12	± 9	± 56	98	86
STV12D12F	12	± 12	± 41	94	87
STV12D15F	12	± 15	± 34	98	87
STV15D03F	15	± 3.3	± 140	75	82
STV15D05F	15	± 5	± 56	43	86
STV15D09F	15	± 9	± 41	57	86
STV15D12F	15	± 12	± 34	63	87
STV15D15F	15	± 15	± 34	78	87

MECHANICAL SPECIFICATIONS



Pin	Function
1	GND
3	+Vin
5	NC
9	0V
11	-Vout
12	NC
14	+Vout
18	NC
20	NC
22	NC

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

STV 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 & 5 Vin models			7.5	Vdc
	9 Vin models			12.5	
	12 Vin models			18	
	15 Vin models			21	
Reverse Voltage Protection				0.3	A

STV OUTPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Rated Power	All models			1.0	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		5	10	%
	9,12 & 15 Vout		3	10	%
Ripple & Noise	BW = DC to 20MHz All models		45	90	mVp-p
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

STV GENERAL CHARACTERISTICS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Temperature	Specification	-40		85	°C
	Storage	-55		125	°C
Isolation	Isolation Test Voltage	3000			Vdc
	Resistance	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				2.4	g

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

CONTACT INFORMATION

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