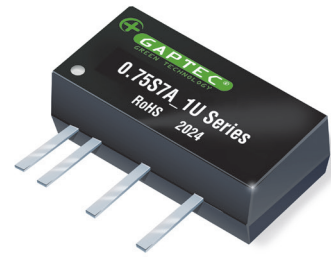


0.75S7A_1U series

0.75W - Single/Dual Output DC-DC Converter - Fixed Input - Isolated & Unregulated



DC-DC Converter

0.75 Watt

- ⊕ High efficiency up to 86%
- ⊕ 1000VDC isolation
- ⊕ SIP package
- ⊕ Low ripple and noise
- ⊕ Operating temperature: -40°C to +85°C
- ⊕ International standard pinout
- ⊕ EMI complies with EN55032 Class B

The 0.75S7A_1U series meet reinforced insulation requirements. They are specially designed for applications where require compact size, high isolation, low isolation capacitor and low leakage current power. They are widely used in electricity, IGBT drivers and so on.

These products apply to:

- 1) Where the voltage of the input power supply is fixed (voltage variation $\leq \pm 10\%$)
- 2) Where isolation is necessary between input and output (isolation voltage 1000VDC)
- 3) Where do not has high requirement of line regulation and the ripple & noise of the output voltage;

Such as: Collection and isolation, High voltage collection circuit, IGBT-driven circuits, etc.



Common specifications

Short circuit protection:	1 sec. MAX
Cooling:	Nature convection
Operation temperature range:	-40°C – +85°C
Storage temperature range:	-40°C – +125°C
Case temperature:	100°C MAX
Lead temperature:	260°C MAX, 1.5mm from case for 10 sec
Storage humidity range:	< 95%
MTBF (MIL-HDBK-217F@25°C):	>1,121 Mhours
Safety standard:	IEC 60950-1
Case material:	Plastic [UL94-V0]
Weight:	2.3g
Dimensions:	19.3x6.1x9.9mm

Output specifications

Item	Test condition	Min	Typ	Max	Units
Output voltage accuracy				± 3	%
Line regulation	For Vin change of $\pm 1\%$			± 1.2	%
Load regulation	20% to 100% load • 3.3V output • Others			20 10	% %
Temperature coefficient	100% full load		± 0.02		%/°C
Ripple & Noise	20MHz Bandwidth			75	mVp-p
Switching frequency	Full load, nominal input		80		KHz

Input specifications

Item	Test condition	Min	Typ	Max	Units
Input voltage range				± 10	%
Input surge voltage (1sec. max.)	• 5VDC input • 12VDC input • 24VDC input • 48VDC input			7 15 28 54	VDC VDC VDC VDC
Reflected Ripple Current*			20		mApk-pk
Input filter	Capacitor				

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute	1000			VDC
Isolation resistance	Test at 500VDC	1000			MΩ
Isolation capacitance			60		pF

Example:

0.75S7A_0505D1U

0.75 = 0.75Watt; S7 = SIP7; A = Pinning; 0505 = 5Vin; 5Vout;

D = Dual Output; 1 = 1kVDC isolation; U = Unregulated Output

* Reflected ripple current measured with a simulated source inductance of 12μH and a source capacitor Cin(47μF, ESR<1.0Ω at 100KHz).

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Single Output

Part Number	Input Voltage [V]	Output Voltage [VDC]	Input current		Output current [mA]	Capacitive load [μF, max]	Efficiency [% , typ]
			No load [mA, max]	Full load [mA, typ]			
0.75S7A_0503S1U	5	3.3	30	205	227.3	100	73
0.75S7A_0505S1U	5	5	30	200	150	100	75
0.75S7A_0507S1U	5	7.2	30	202	104.2	100	74
0.75S7A_0509S1U	5	9	30	200	83.3	100	75
0.75S7A_0512S1U	5	12	30	197	62.5	100	76
0.75S7A_0515S1U	5	15	30	197	50	100	76
0.75S7A_0518S1U	5	18	30	197	41.7	100	76
0.75S7A_0524S1U	5	24	30	194	31.2	100	77
0.75S7A_1203S1U	12	3.3	20	85	227.3	100	73
0.75S7A_1205S1U	12	5	20	84	150	100	74
0.75S7A_1207S1U	12	7.2	20	84	104.2	100	74
0.75S7A_1209S1U	12	9	20	83	83.3	100	75
0.75S7A_1212S1U	12	12	20	81	62.5	100	77
0.75S7A_1215S1U	12	15	20	80	50	100	78
0.75S7A_1218S1U	12	18	20	80	41.7	100	78
0.75S7A_1224S1U	12	24	20	80	31.2	100	78
0.75S7A_2403S1U	24	3.3	10	42	227.3	100	74
0.75S7A_2405S1U	24	5	10	42	150	100	74
0.75S7A_2407S1U	24	7.2	10	41	104.2	100	75
0.75S7A_2409S1U	24	9	10	41	83.3	100	75
0.75S7A_2412S1U	24	12	10	40	62.5	100	78
0.75S7A_2415S1U	24	15	10	40	50	100	78
0.75S7A_2418S1U	24	18	10	40	41.7	100	78
0.75S7A_2424S1U	24	24	10	39	31.2	100	80
0.75S7A_4803S1U	48	3.3	6	21	227.3	100	72
0.75S7A_4805S1U	48	5	6	21	150	100	72
0.75S7A_4807S1U	48	7.2	6	21	104.2	100	72
0.75S7A_4809S1U	48	9	6	21	83.3	100	74
0.75S7A_4812S1U	48	12	6	21	62.5	100	74
0.75S7A_4815S1U	48	15	6	20	50	100	75
0.75S7A_4818S1U	48	18	6	20	41.7	100	75
0.75S7A_4824S1U	48	24	6	21	31.2	100	73

0.75S7A_1U series

0.75W - Single/Dual Output DC-DC Converter - Fixed Input - Isolated & Unregulated

Dual Output

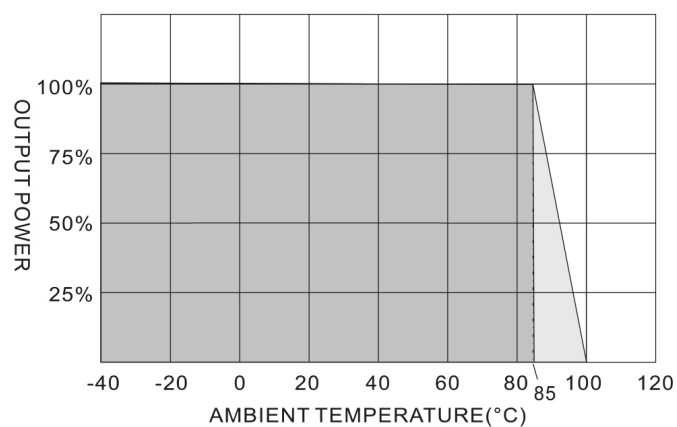
Part Number	Input Voltage [V]	Output Voltage [VDC]	Input current		Output current [mA]	Capacitive load [μF, max]	Efficiency [%, typ]
			No load [mA, max]	Full load [mA, typ]			
0.75S7A_0503D1U	5	±3.3	30	230	±113.6	±100	65
0.75S7A_0505D1U	5	±5	30	211	±75	±100	71
0.75S7A_0507D1U	5	±7.2	30	202	±52	±100	74
0.75S7A_0509D1U	5	±9	30	202	±41.6	±100	74
0.75S7A_0512D1U	5	±12	30	197	±31.2	±100	76
0.75S7A_0515D1U	5	±15	30	197	±25	±100	76
0.75S7A_0518D1U	5	±18	30	189	±20.8	±100	79
0.75S7A_0524D1U	5	±24	30	189	±15.6	±100	79
0.75S7A_1203D1U	12	±3.3	20	126	±113.6	±100	65
0.75S7A_1205D1U	12	±5	20	85	±75	±100	73
0.75S7A_1207D1U	12	±7.2	20	84	±52	±100	74
0.75S7A_1209D1U	12	±9	20	84	±41.6	±100	74
0.75S7A_1212D1U	12	±12	20	80	±31.2	±100	78
0.75S7A_1215D1U	12	±15	20	78	±25	±100	80
0.75S7A_1218D1U	12	±18	20	78	±20.8	±100	80
0.75S7A_1224D1U	12	±24	20	80	±15.6	±100	78
0.75S7A_2403D1U	24	±3.3	10	46	±113.6	±100	67
0.75S7A_2405D1U	24	±5	10	42	±75	±100	74
0.75S7A_2407D1U	24	±7.2	10	41	±52	±100	76
0.75S7A_2409D1U	24	±9	10	41	±41.6	±100	76
0.75S7A_2412D1U	24	±12	10	40	±31.2	±100	78
0.75S7A_2415D1U	24	±15	10	40	±25	±100	78
0.75S7A_2418D1U	24	±18	10	40	±20.8	±100	78
0.75S7A_2424D1U	24	±24	10	40	±15.6	±100	78
0.75S7A_4803D1U	48	±3.3	6	25	±113.6	±100	62
0.75S7A_4805D1U	48	±5	6	24	±75	±100	65
0.75S7A_4807D1U	48	±7.2	6	22	±52	±100	70
0.75S7A_4809D1U	48	±9	6	21	±41.6	±100	72
0.75S7A_4812D1U	48	±12	6	21	±31.2	±100	74
0.75S7A_4815D1U	48	±15	6	21	±25	±100	74
0.75S7A_4818D1U	48	±18	6	21	±20.8	±100	72
0.75S7A_4824D1U	48	±24	6	22	±15.6	±100	70x

0.75S7A_1U series

0.75W - Single/Dual Output DC-DC Converter - Fixed Input - Isolated & Unregulated

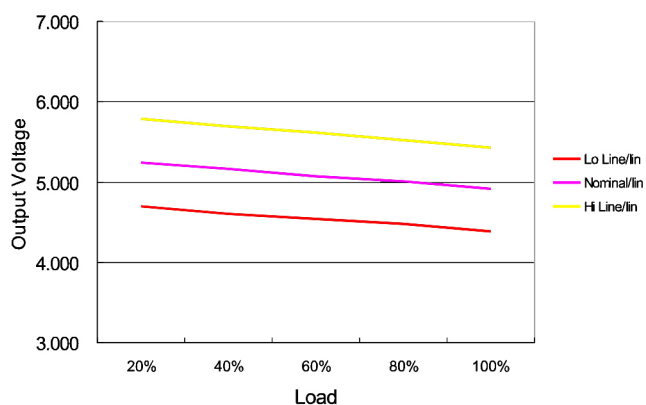
Typical characteristics

Derating Curve



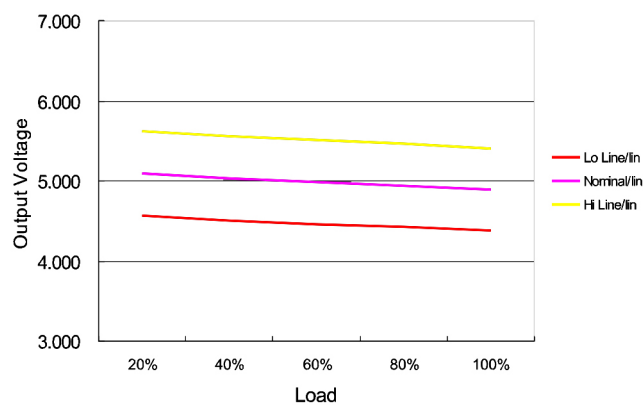
Loading vs. output

LOADING VS OUTPUT VOLTAGE



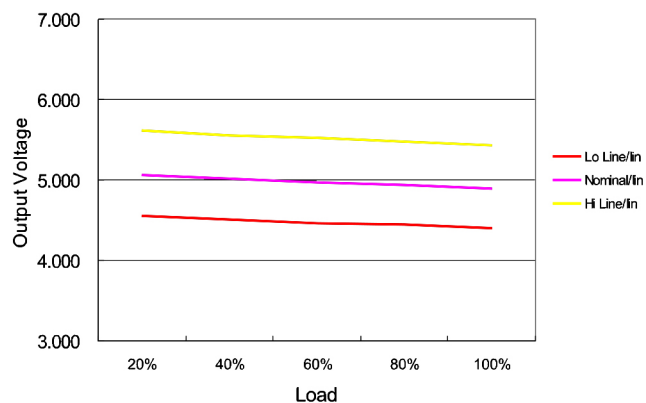
0.75S7A_05yy type

LOADING VS OUTPUT VOLTAGE



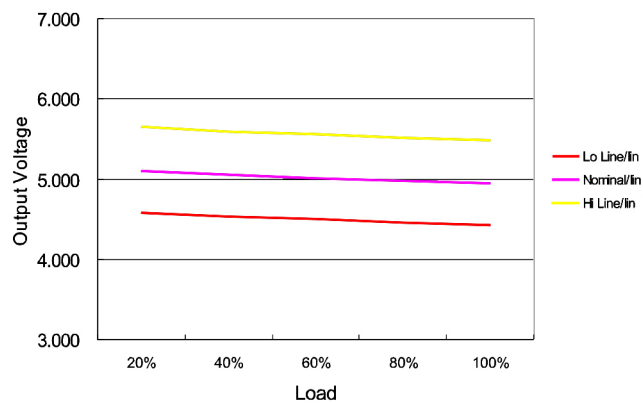
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LOADING VS OUTPUT VOLTAGE



0.75S7A_24yy type

LOADING VS OUTPUT VOLTAGE



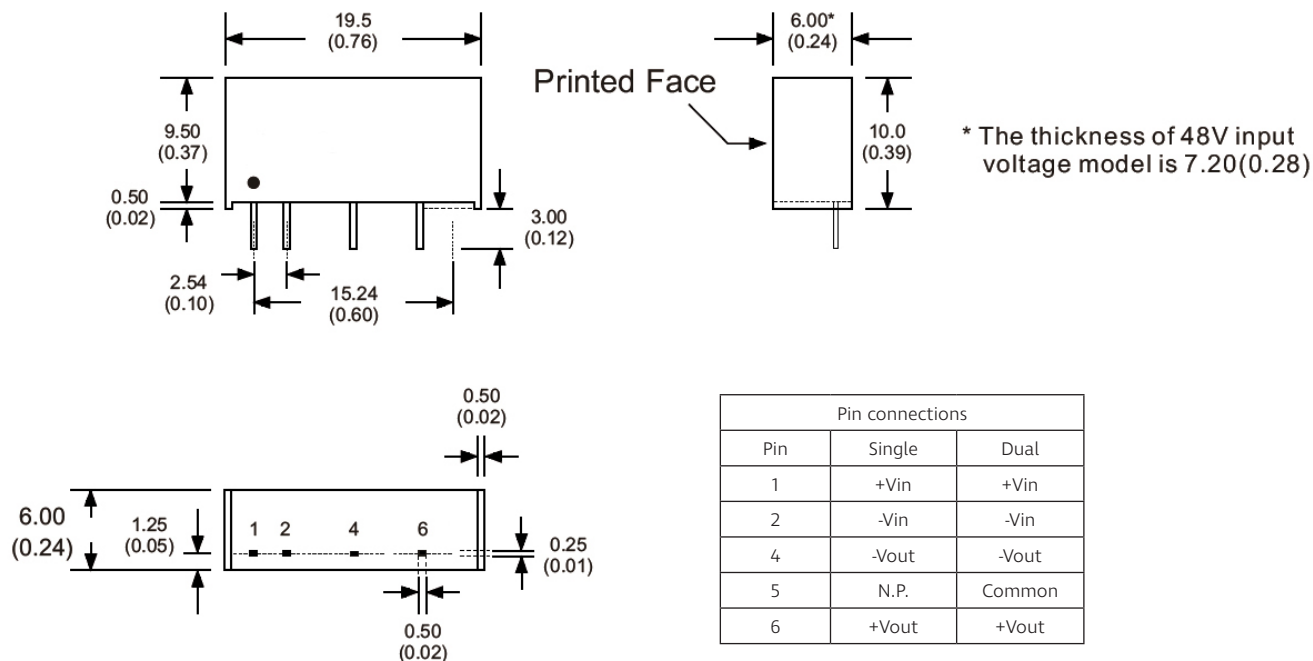
0.75S7A_48yy type

0.75S7A_1U series

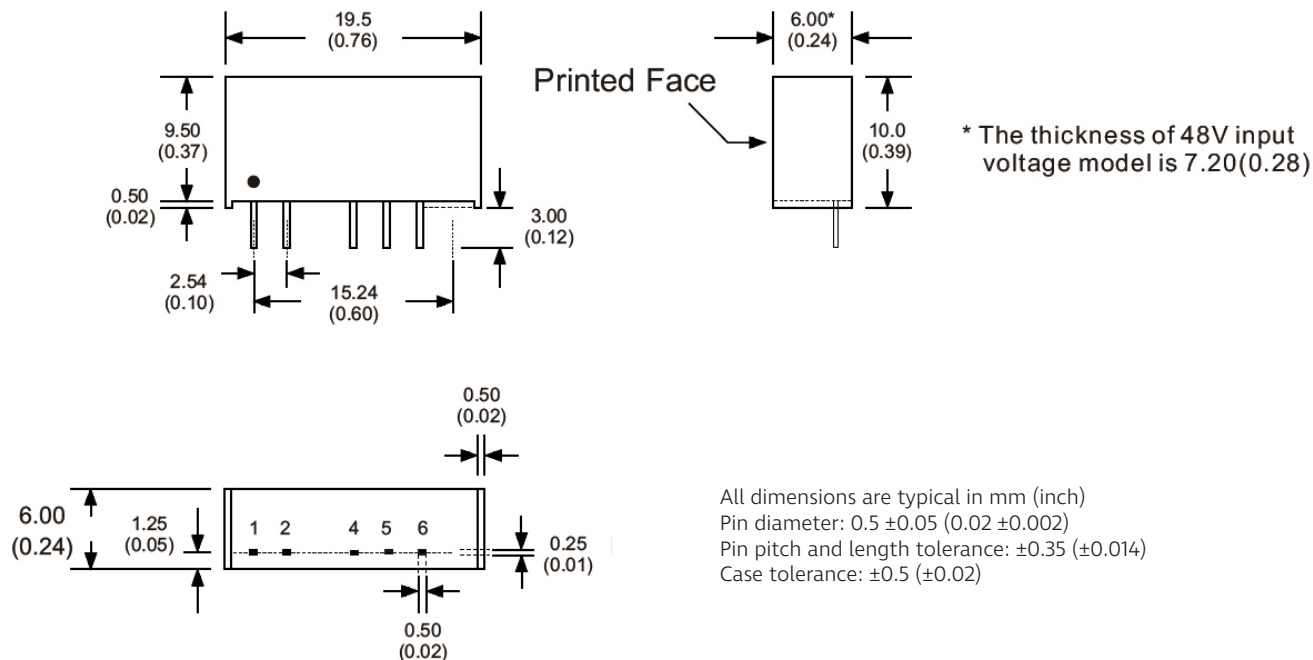
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Mechanical dimensions

Single



Dual



All dimensions are typical in mm (inch)
Pin diameter: 0.5 ± 0.05 (0.02 ± 0.002)
Pin pitch and length tolerance: ± 0.35 (± 0.014)
Case tolerance: ± 0.5 (± 0.02)