

Unregulated SMD DC/DC Converters

FSS-Series 1 Watt, Single / Dual Output



- DC/DC unregulated converter modules
- SMD pinning
- 1s short circuit proof
- 1kVdc isolation voltage
- UL 94V-0 package material
- DC/DC Wandler unreguliert
- SMD pinning
- 1s kurzschlussfest
- 1kVdc galvanische Trennung
- UL 94V-0 Gehäusematerial und Vergussmasse
- Convertisseur DC/DC non régulé
- Brochage SMD
- Résistant 1s au court-circuit
- Isolation galvanique 1kVdc
- Matériaux de boîtier et masse de remplissage conformes UL 94V-0

Product range

Typenübersicht

Sommaire des types

PART NUMBER	PINNING	INPUT VOLTAGE		OUTPUT		EFFICIENCY
		Nominal	Range	Voltage	Current	Typical
FSS(xx)-1V8SS	SMD-8	1.8, 3.3, 5, 9, 12, 15, 24 VDC	±10%	1.8 VDC	555 mA	70%
FSS(xx)-3V3SS			±10%	3.3 VDC	303 mA	75%
FSS(xx)-05SS			±10%	5 VDC	200 mA	70-78%
FSS(xx)-09SS			±10%	9 VDC	111 mA	70-78%
FSS(xx)-12SS			±10%	12 VDC	84 mA	78-82%
FSS(xx)-15SS			±10%	15 VDC	66 mA	80-84%
FSS(xx)-24SS			±10%	24 VDC	42 mA	74-85%
Dual Output						
FSS(xx)-1V8DS	SMD-10	1.8, 3.3, 5, 9, 12, 15, 24 VDC	±10%	±1.8 VDC	±278 mA	70%
FSS(xx)-3V3DS			±10%	±3.3 VDC	±152 mA	70%
FSS(xx)-05DS			±10%	±5 VDC	±100 mA	70-78%
FSS(xx)-09DS			±10%	±9 VDC	±56 mA	75-80%
FSS(xx)-12DS			±10%	±12 VDC	±42 mA	78-84%
FSS(xx)-15DS			±10%	±15 VDC	±33 mA	80-84%
FSS(xx)-24DS			±10%	±24 VDC	±21 mA	80-84%

Ordering Example:

Substitute (xx) for 1V8, 3V3, 05, 09, 12, 15 or 24

FSS 05 - 3V3 S S

Product Series

Nominal Input Voltage

Nominal Output Voltage
(3V3 = 3.3V)

SMD pinning

S = Single Output Voltage
D = Dual Output Voltage

Specifications

Spezifikationen

Spécifications

All values refer to an ambient temperature of 25°C and nominal rated values where nothing else is specified

INPUT SPECIFICATIONS

Characteristics		Conditions	min	typ	max	unit
U_{in}	Input voltage	$T_A < T_{Amax}$	±10			% $U_{in nom}$
	Input filter		capacitor type			

OUTPUT SPECIFICATIONS

Characteristics		Conditions	min	typ	max	unit
U_{acc}	Output voltage accuracy	of nominal output voltage			±5	% U_{out}
	Line regulation	$U_{in delta} = ((U_{in nom} - U_{in}) / U_{in nom}) \times 100$			±1.2 $U_{in delta}$	% U_{out}
	Load regulation see "Load Regulation", page 3	10% to 100% load, $U_{out} = 1.8, 3.3Vdc$			20	% U_{out}
		10% to 100% load, $U_{out} = 5Vdc$			15	
		10% to 100% load, $U_{out} = 9, 12, 15, 24V$			10	
U_{rn}	Output ripple & noise	Single output			100	mVpp
		Dual output			100	mVpp
	Output short circuit characteristic			$I_{out} > I_{nom}$		
	Output short circuit protection		1			sec

GENERAL SPECIFICATIONS

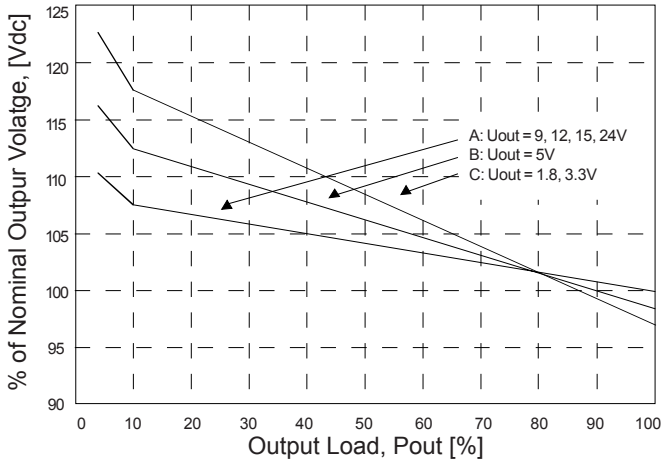
Characteristics		Conditions	min	typ	max	unit
U_{iso}	Isolation voltage	input/output	1'000			Vdc
R_{iso}	Isolation resistance	Input to output		10		GOhm
$C_{I/O}$	Input / output capacitance	Input to output	15		70	pF
f_s	Switching frequency	Fixed, at full load		100		kHz
	Case material		Plastic, UL 94V-0			
	Weight	Single output		1.5		g
		Dual output			2.2	
	Dimensions	LxWxH, see "case" page 3	12.75 x 11.1 x 7.2			mm
		LxWxH, see "case" page 4	15.24 x 11.1 x 7.25			mm

ENVIRONMENTAL SPECIFICATIONS

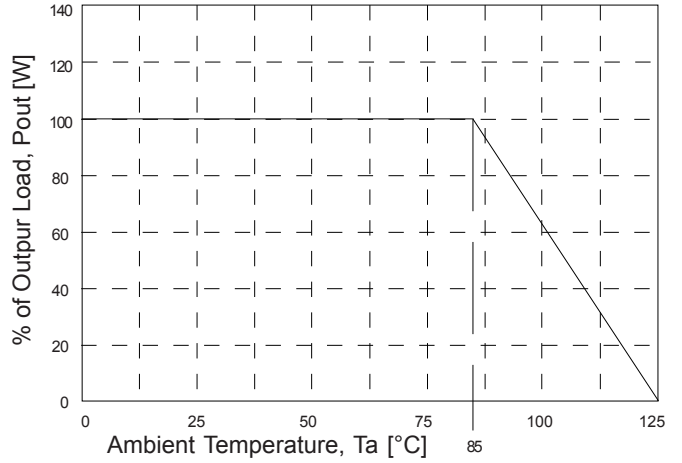
Characteristics		Conditions	min	typ	max	unit
T_A	Operating temperature	Ambient temperature, see also "Derating" page 3	-40		+85	°C
	Storage temperature	Ambient temperature	-55		+125	°C

Typical characteristics

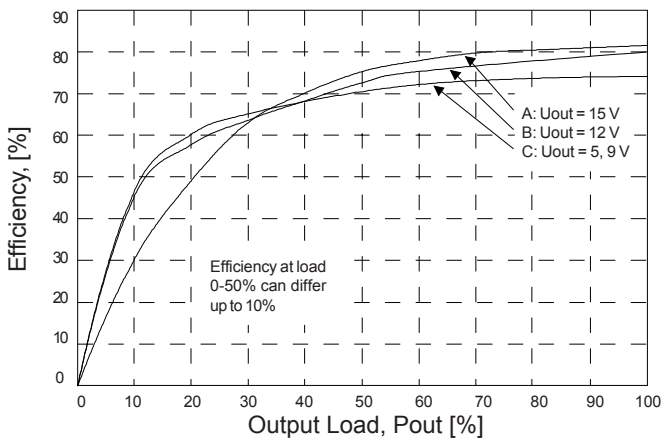
Load Regulation (typical values)



Derating



Efficiency (typical values)



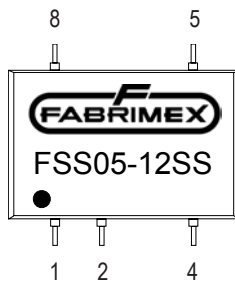
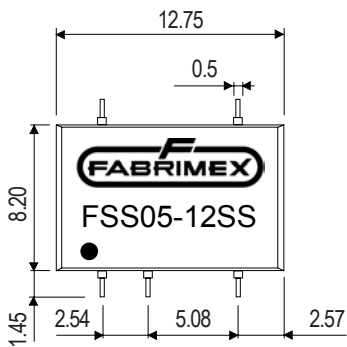
Case

Gehäuse

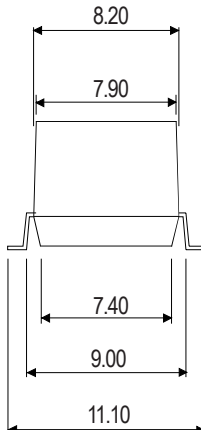
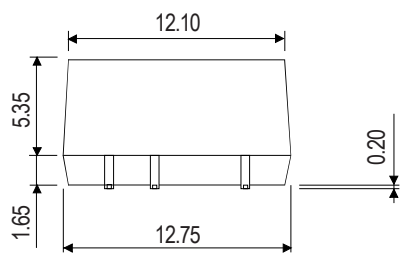
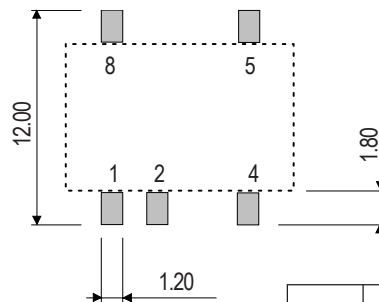
Boîtier

Normal tolerance 1/10 ±0.5 mm, 1/100 ±0.25 mm

Single output; FSSxx-xxSS:



Recommended Footprint, Top View



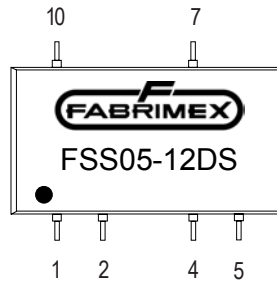
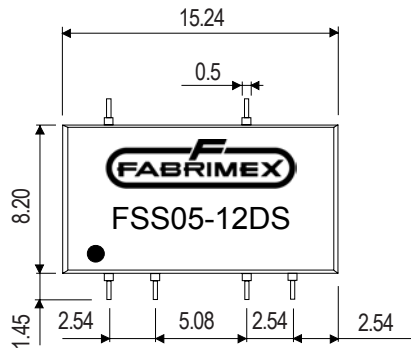
Pin	Single
1	-Vin
2	+Vin
3	NP
4	-Vout
5	+Vout
6	NP
7	NP
8	NC

NP = No Pin

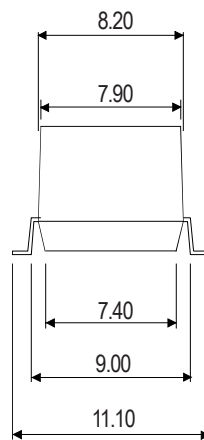
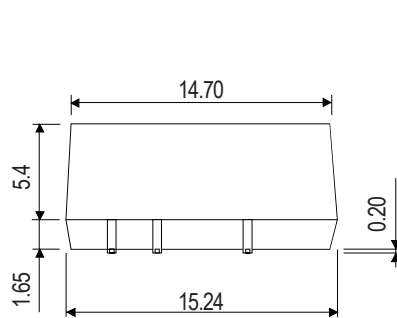
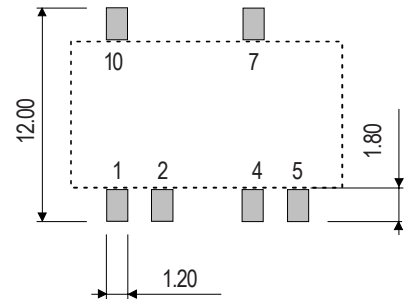
NC = No Connection

Continued:

Dual output; FSSxx-xxDS:



Recommended Footprint, Top View



Pin	Single
1	-Vin
2	+Vin
3	NP
4	common
5	-Vout
6	NP
7	+Vout
8	NP
9	NP
10	NC

NP = No Pin
NC = No Connection

Notice: All statements, technical information, and recommendations related to FABRIMEX's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use.

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