

SERIES: FSK-S15

DESCRIPTION: switching power supply

features

- UL, C-UL, CB, CE Marking
- encapsulated compact case
- high efficiency
- universal input
- surface mounting technology
- built in EMI filter
- inrush current limit
- 67kHz fixed frequency
- fixed output voltage
- thermal shutdown
- short circuit protection
- low output ripple and noise
- isolated output
- 2 year warranty



model number	input voltage	output voltage	power max.	ripple & noise max.	efficiency (%)
FSK-S15-3R3U	AC 85-264V / DC 110-340V	3.3V @ 3.0A	9.9 W	80 mVp-p	75
FSK-S15-5U	AC 85-264V / DC 110-340V	5V @ 3.0A	15.0 W	80 mVp-p	75
FSK-S15-12U	AC 85-264V / DC 110-340V	12V @ 1.3A	15.6 W	120 mVp-p	78
FSK-S15-15U	AC 85-264V / DC 110-340V	15V @ 1.0A	15.0 W	150 mVp-p	78
FSK-S15-24U	AC 85-264V / DC 110-340V	24V @ 0.65A	15.6 W	200 mVp-p	78

INPUT

parameter	conditions/description	min	nom	max	units
input frequency		47	(50~60)	440	Hz
input voltage		85		264	VAC
		110		340	VDC
input current	AC input of 110 VAC			0.31	A
	AC input of 220 VAC			0.16	A
inrush current	measured at 110 VAC at full load, cold start			30	A
	measured at 220 VAC at full load, cold start			60	A
leakage current	measured at 110 VAC			0.5	mA
	measured at 220 VAC			0.75	mA

OUTPUT

parameter	conditions/description	min	nom	max	units
voltage tolerance		-2%		+2%	
ripple and noise		-1%		+1%	
line regulation		-1%		+1%	
load regulation		-1%		+1%	
dynamic load regulation		-3%		+3%	
temperature drift		-1%		+1%	
rise time				400	ms
hold-up time		10			ms



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PROTECTION CIRCUIT

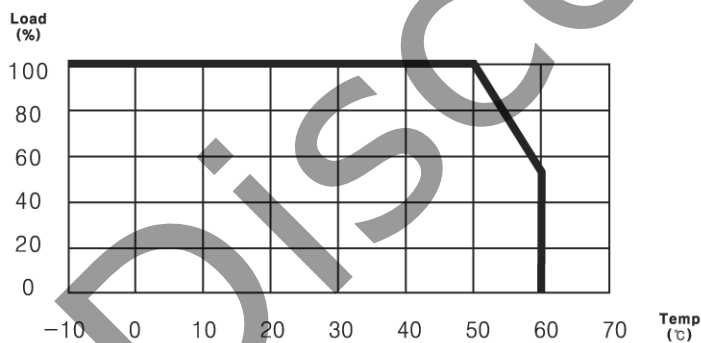
parameter	conditions/description
output over current	works at over 105% of the rating and recovers automatically.
over temperature	145 °C

GENERAL

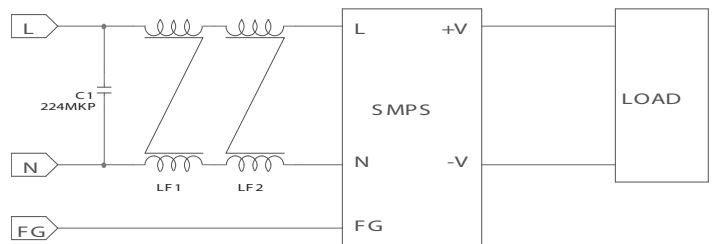
parameter	conditions/description	min	nom	max	units
operating temp.		-10		60	°C
storage temp.		-20		70	°C
operating humid.	non-condensing	20%		90%	RH
storage humid.	non-condensing	20%		90%	RH
isolation voltage (HI-POT)	applied for 1 minute, 10mA primary to secondary, 500 Vdc @ 100 MΩ	3000			VAC
vibration	at 10G 3 minute period	10		55	Hz
impact	50G for 11mS, once on each X, Y, Z axis				
MTBF	3.0 x 10 ⁵				hours
RoHS	yes				
safety	approved to UL60950(E222889), CSA C22.2 NO.60950, CB(IEC 60950), CE(EN60950)				
EMC ¹	EN61204-3 class B, EN 61000-3-3, EN 61000-3-2 (through TUV)				
warranty	standard warranty length			2	years

NOTE: 1. to meet the standard of EN61204-3 class B, use the external noise filter between L and N

DERATING CURVE



EXTERNAL EMI FILTER

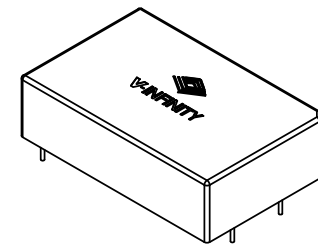
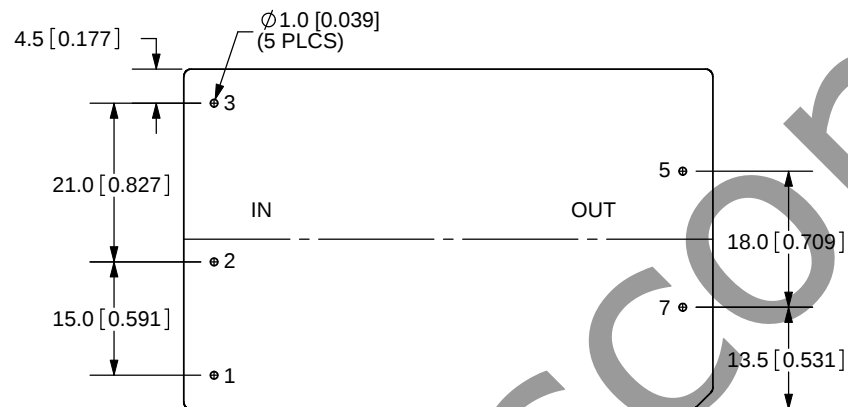
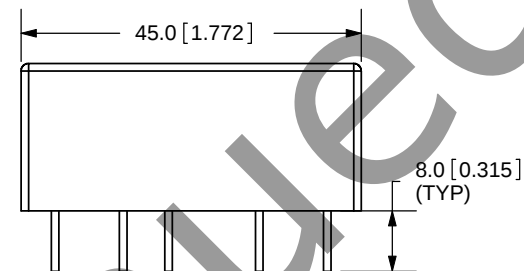
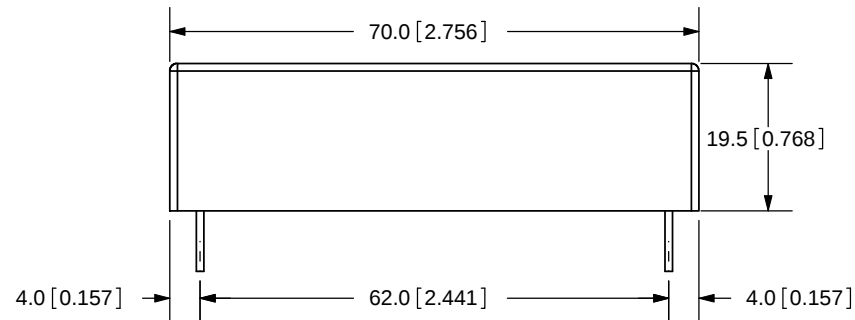


C1 = 220nF / 275Vac, X2 Capacitor

LF1 = 20mH Common Mode Line Filter, Toroidal core ϕ 14.0mm

LF2 = 20mH Common Mode Line Filter, Toroidal core ϕ 14.0mm

REV.	DESCRIPTION	DATE
A	NEW DRAWING	9/11/2006
B	corrected pin 5 and 7 output assignments	11/24/2008



Scale 1:2

TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



PIN ASSIGNMENTS

Pin Number	Single Output
1	FG
2	AC (N)
3	AC (L)
4	No Pin
5	+Vout
6	No Pin
7	-Vout
8	No Pin



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TITLE: AC-DC CONVERTER		REV: B
PART NO. FSK-S15		UNITS: MM [INCHES]
DRAWN BY: JMS	APPROVED BY:	SCALE: 1:1

PC FILE NAME:
FSK-S15

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Notes:
1. All dimensions are in mm [inches]
2. Weight: 100g or less