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SERIES: FSK-S5**DESCRIPTION:** AC-DC converter**features**

- approved to UL60950, CSA C22.2 NO.60950, CB(IEC 60950), CE(EN60950)
- universal input 85~264 Vac/ 110~340 VDC
- encapsulated, compact case
- high efficiency
- surface mounting technology
- 100kHz fixed frequency
- fixed output voltage
- thermal shutdown
- output 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-S5-3R3U | AC 85-264V / DC 110-340V | 3.3V @ 1.25A | 4.125 W | 80 mVp-p | 71 |
| FSK-S5-5U | AC 85-264V / DC 110-340V | 5V @ 1.0A | 5.0 W | 80 mVp-p | 75 |
| FSK-S5-12U | AC 85-264V / DC 110-340V | 12V @ 0.42A | 5.0 W | 120 mVp-p | 77 |
| FSK-S5-15U | AC 85-264V / DC 110-340V | 15V @ 0.33A | 5.0 W | 150 mVp-p | 77 |
| FSK-S5-24U | AC 85-264V / DC 110-340V | 24V @ 0.21A | 5.0 W | 200 mVp-p | 77 |

INPUT

| parameter | conditions/description | min | nom | max | units |
|-----------------|--|-----|---------|------|-------|
| input frequency | | 47 | (50~60) | 440 | Hz |
| input voltage | output power derated from 85-90 VAC | 85 | | 264 | VAC |
| | | 110 | | 340 | VDC |
| input current | AC input of 110 VAC | | | 150 | mA |
| | AC input of 220 VAC | | | 80 | mA |
| inrush current | measured at 110 VAC at full load, cold start | | | 20 | A |
| | measured at 220 VAC at full load, cold start | | | 40 | 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 | | | | 100 | mS |
| hold-up time | | 10 | | | mS |

SERIES: FSK-S5

DESCRIPTION: AC-DC converter

PROTECTION CIRCUIT

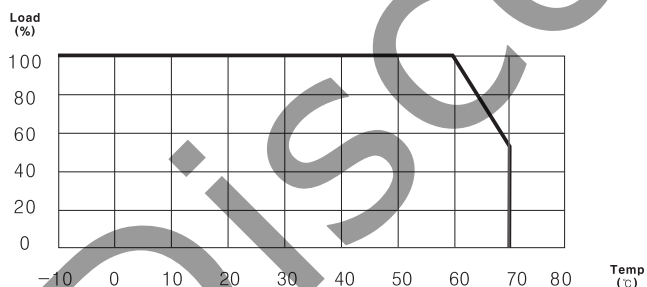
| parameter | conditions/description |
|---------------------|--|
| output over current | works at over 105% of the rating and recovers automatically. |
| over temperature | 150 °C |
| over voltage | clamp, 130~150% |

GENERAL

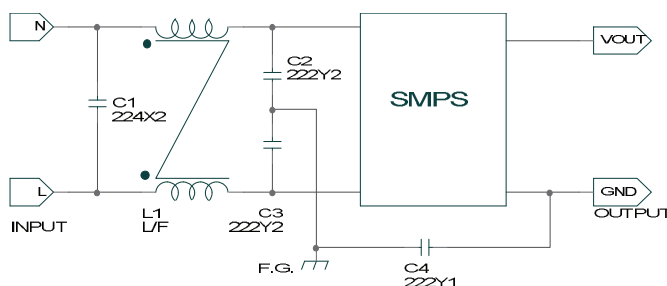
| parameter | conditions/description | min | nom | max | units |
|----------------------------|--|------|-----|-----|-------|
| operating temp. | | -20 | | 70 | °C |
| storage temp. | | -40 | | 80 | °C |
| operating humid. | non-condensing | 20% | | 90% | RH |
| storage humid. | non-condensing | 20% | | 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 | 4.5 x 10 ⁵ | | | | hours |
| RoHS | yes | | | | |
| safety | approved to UL60950-1(E222889), CSA C22.2 NO.60950, CB(IEC 60950-1), CE(EN60950) | | | | |
| EMC ¹ | 5W, 10W single output: approved; EN61204-3 class B, EN 6100-3-3 (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



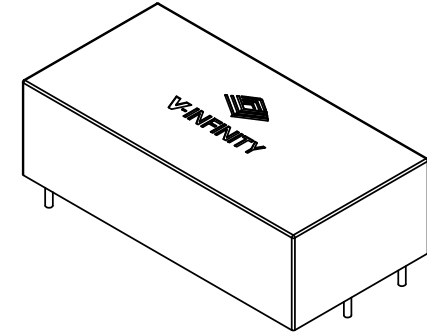
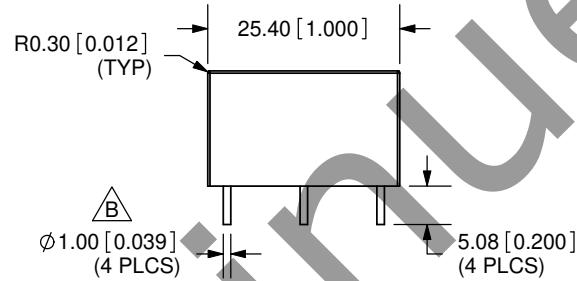
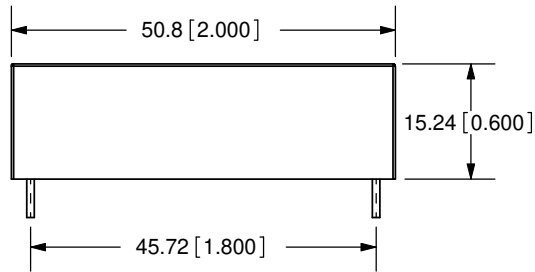
EXTERNAL EMI FILTER



Components

- L1 = 10~30mH Common Mode Line Filter
- C1 = 220nF X2 Capacitor
- C2,C3 = 2200pF Y2 Capacitor
- C4 = 2200pF Y1 Capacitor

| REV. | DESCRIPTION | DATE |
|------|------------------------------|-----------|
| A | NEW DRAWING | 9/13/2007 |
| B | added pin diameter dimension | 6/27/2008 |



TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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PIN ASSIGNMENTS

| Pin Number | Single Output |
|------------|---------------|
| 1 | AC (N) |
| 2 | AC (L) |
| 3 | NO pin |
| 4 | -V out |
| 5 | +V out |

| | | |
|------------------------|--------------|--------------------|
| TITLE: AC-DC Converter | | REV: B |
| PART NO. FSK-S5 | | UNITS: MM [INCHES] |
| DRAWN BY: JMS | APPROVED BY: | SCALE: 1:1 |

- Notes:
1. All dimensions are in mm [inches]
 2. Weight: 40g or less
 3. Case material : PBT, UL94V-0
 4. Construction: Encapsulated soft pot

PC FILE NAME:
FSK-S5

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