

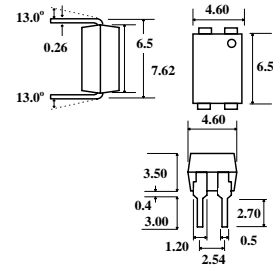
SHF615A-3

Transistor Optically Coupled Isolator

Isocom Ltd supplies high reliability devices for applications requiring an operating temperature range of -55°C to +100°C

Devices supplied are approved to BS9400, and have completed rigorous testing. Various high reliability test options are offered.

As a manufacturer of high reliability optocouplers, the Isocom Ltd manufacturing plant in the North East of England has site approval to BS9000 (registration number 1294/M) and CECC20000 (registration number M/1084/CECC/UK) issued by the British Standards Institution.



Together with CECC, BS9000 is a preferred standard for use in European military projects. Consequently, Isocom Ltd's approved devices are listed in the CECC "MUAHAG" preferred products list.

The BS9000 approval is also recognised as meeting the equivalent criteria to those required by BS5750/IS09000/EN29000.

The Company's customers can be assured of our commitment to stringent quality, reliability and inspection standards, as demonstrated by our existing approvals. Other customer specific options can also be offered.

| Features | Applications | |
|---|----------------------------|--|
| Current transfer ratio (CTR: min 100%) | Automatic vending machines | |
| High Electrical Isolation (2,800VRMS) | System appliances | |
| Compact dual-in-line package | Computer terminals | |
| | Microwave ovens | |
| | Medical instruments | |

Isocom Ltd reserves the right to change the details on this specification without notice. Please consult Isocom Ltd prior to use.

Isocom Ltd cannot accept liability for any errors or omissions.

For sales enquiries, or further information, please contact our sales office at:

Isocom Ltd, Hutton Close, Crowther Industrial Estate, District 3, Washington, NE38 0AH

Tel: +44 0191 4166 546 Fax: +44 0191 4155 055 Email Isocom@isocomoptocouplers.com

Or go to the Isocom Website @: [Http://www.isocom.uk.com](http://www.isocom.uk.com)

Description

The SFH615A-3 is a single channel device in a dual-in-line package suitable for mounting in printed circuit board assemblies. The device incorporates a high radiance LED and phototransistor detector.

Absolute Maximum Ratings

Storage temperature -55°C to +150°C
Operating temperature -55°C to +100°C
Input-to-output isolation voltage2,800VRMS

Input Diode

Forward DC current $I_F = 60\text{mA}$
Reverse DC voltage $V_R = 6.0\text{V}$
Peak forward current $I_{FM} = 2.5\text{A}$
Power Dissipation $P = 100\text{mW}$
Power Dissipation $P_{tot} = 250\text{mW}$

Output Phototransistor

Collector-emitter voltage $BV_{ceo} = 70\text{V}$
Emitter-collector voltage $BV_{eco} = 6.0\text{V}$
Collector current $I_C = 50\text{mA}$
Collector current ($t \leq$) $I_C = 100\text{mA}$
Power Dissipation $P_C = 150\text{mW}$

Electrical Characteristics $T_A = 25^\circ\text{C}$

| parameter | symbol | Test Conditions | min | *typ | max | Units |
|--------------------------------------|---------------|---|-----|------|------|---------------|
| Forward voltage | V_F | $I_F = 60\text{mA}$ | | 1.25 | 1.65 | V |
| Breakdown voltage | V_{BR} | $I_R = 10\mu\text{A}$ | | 30 | 36 | V |
| Reverse Current | I_R | $V_R = 6\text{V}$ | | 0.01 | 10 | μA |
| Collector emitter saturation voltage | $V_{CE(SAT)}$ | $I_F = 10\text{mA}$, $I_C = 2.5\text{mA}$ | | 0.25 | 0.4 | V |
| Current transfer ratio | CTR | $I_F = 10\text{mA}$ | 100 | | 200 | % |
| Turn-on time | t_{on} | $I_F = 5\text{mA}$ $V_{CC} = 5\text{V}$, | | 4.2 | 8.0 | μS |
| Turn-off time | t_{off} | $R_L = 2\text{K}\Omega$ | | 23 | 39 | μS |

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