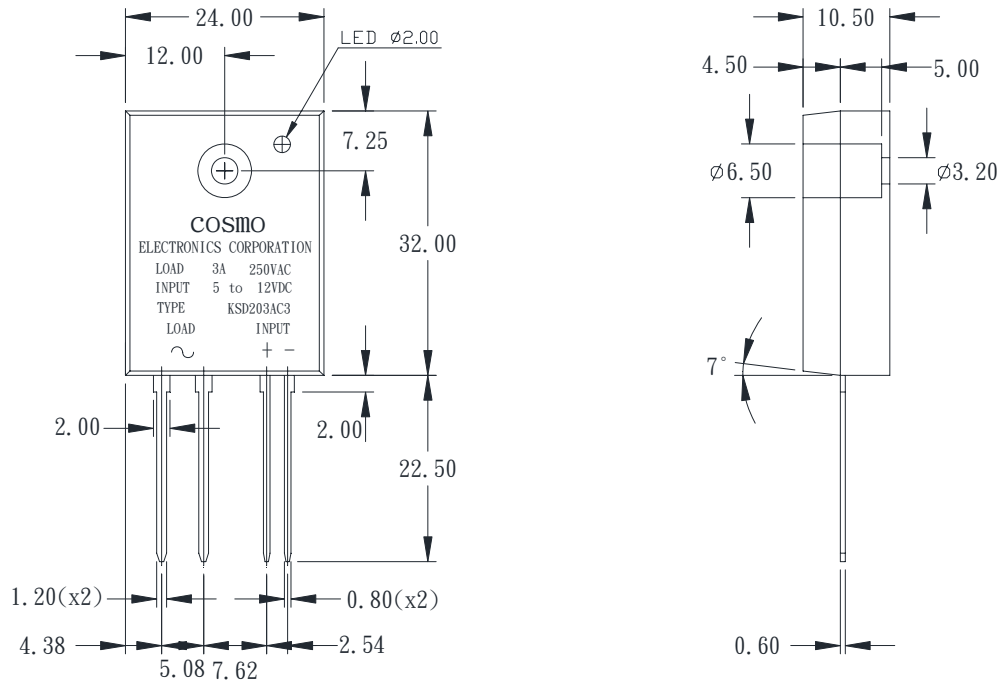


# PRODUCT SPECIFICATION

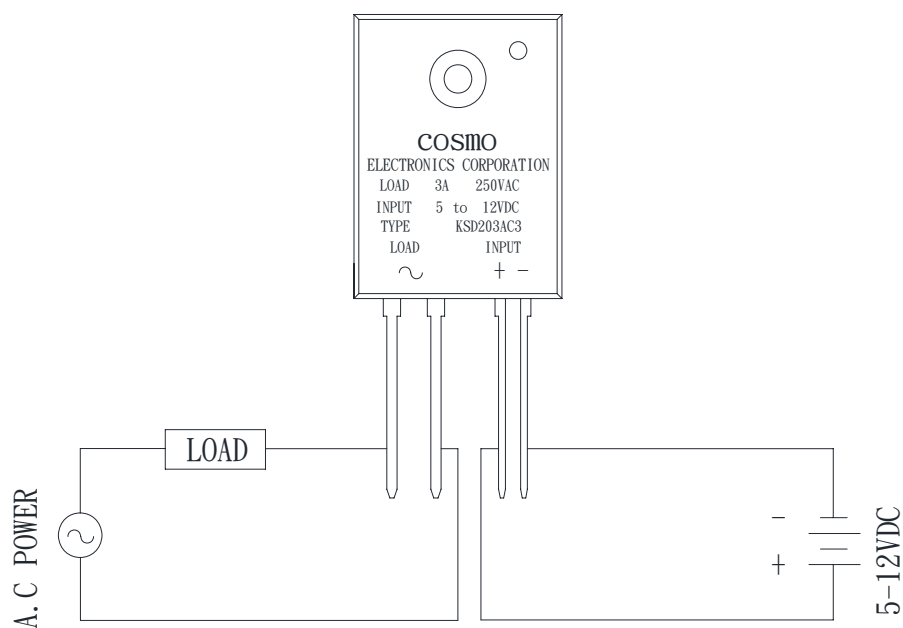
DATE: 04/22/14'

|                                         |                                         |              |           |
|-----------------------------------------|-----------------------------------------|--------------|-----------|
| <b>cosmo</b><br>ELECTRONICS CORPORATION | SOLID STATE RELAY :<br><b>KSD203AC3</b> | NO. 58032203 | REV.<br>5 |
|                                         |                                         | SHEET 1 OF 2 |           |

## 1. OUTSIDE DIMENSION : UNIT ( mm )



## 2. SCHEMATIC : TOP VIEW



# PRODUCT SPECIFICATION

DATE: 04/22/14'

|                                         |                                         |              |        |
|-----------------------------------------|-----------------------------------------|--------------|--------|
| <b>cosmo</b><br>ELECTRONICS CORPORATION | SOLID STATE RELAY :<br><b>KSD203AC3</b> | NO. 58032203 | REV. 5 |
|                                         |                                         | SHEET 2 OF 2 |        |

## 3. Absolute Maximum Ratings

(Ta=25°C)

| Parameter                         |                                           | Symbol      | Rating  | Unit    |
|-----------------------------------|-------------------------------------------|-------------|---------|---------|
| Input                             | Input signal voltage                      | $V_{IN}$    | 5-12    | VDC     |
|                                   | Drop-out voltage                          | $V_{do}$    | 1       | VDC     |
| Output                            | RMS on-state current                      | $I_T$       | 3       | Arms    |
|                                   | Peak one cycle surge current              | $I_{surge}$ | 30      | A       |
|                                   | Repetitive peak-off state voltage         | $V_{DRM}$   | 600     | V       |
|                                   | Operating frequency                       | f           | 47~70   | Hz      |
|                                   | Critical rate of rise of on-state current | di/dt       | 50      | A/us    |
|                                   | Load supply voltage                       | $V_{out}$   | 250     | Vrms AC |
| Isolation voltage input to output |                                           | $V_{iso}$   | 4000    | Vrms    |
| Operating temperature             |                                           | $T_{opr}$   | -30~100 | °C      |
| Storage temperature               |                                           | $T_{stg}$   | -30~125 | °C      |
| Soldering temperature 10 sec      |                                           | $T_{sol}$   | 260     | °C      |

## 4. Electrical Characteristics

(Ta=25°C)

| Parameter                                         |                                            | Symbol             | Conditions        | MIN | TYP | MAX | Unit  |
|---------------------------------------------------|--------------------------------------------|--------------------|-------------------|-----|-----|-----|-------|
| Input                                             | Pick-up voltage                            | $V_{pu}$           | $I_T=1Arms$       |     |     | 4   | VDC   |
|                                                   | Input current                              | $I_{in}$           | $V_{in}=5\sim12V$ | 5   |     | 35  | mA    |
| Output                                            | On-state voltage                           | $V_T$              | $I_T=1Arms$       |     |     | 1.5 | Vrms  |
|                                                   | Operating current                          | $I_{op}$           | $V_{out}=240vrms$ | 50  |     |     | mArms |
|                                                   | Leakage current                            | $I_{leak}$         | $V_{out}=240vrms$ |     |     | 7   | mArms |
|                                                   | Critical rate of rise of off-state voltage | dv/dt              |                   | 50  | 200 |     | V/us  |
|                                                   | Zero-cross voltage                         | $V_{ox}$           |                   |     | YES |     |       |
|                                                   | Load Voltage Rating                        | $V_{out}$          | $I_T=50mArms$ MIN | 50  |     | 280 | VAC   |
| Minimum trigger current                           |                                            | $I_{FT}$           | $V_{DRM}=600V$    |     |     | 10  | mA    |
| Isolation resistance input to output              |                                            | $R_{ISO}$          | DC500V            | 10  |     |     | GΩ    |
| Turn-on time                                      |                                            | $T_{on}$           | 60Hz AC           |     |     | 8.3 | mS    |
| Turn-off time                                     |                                            | $T_{off}$          | 60Hz AC           |     |     | 8.3 | mS    |
| Thermal resistance<br>(between junction and case) |                                            | $R_{th}$<br>(j-c)l |                   |     | 1.3 |     | °C/W  |