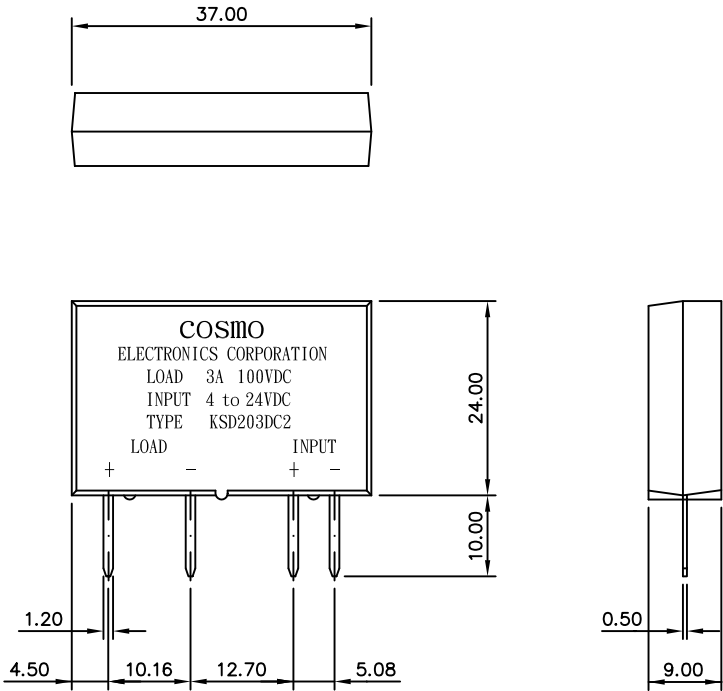


# PRODUCT SPECIFICATION

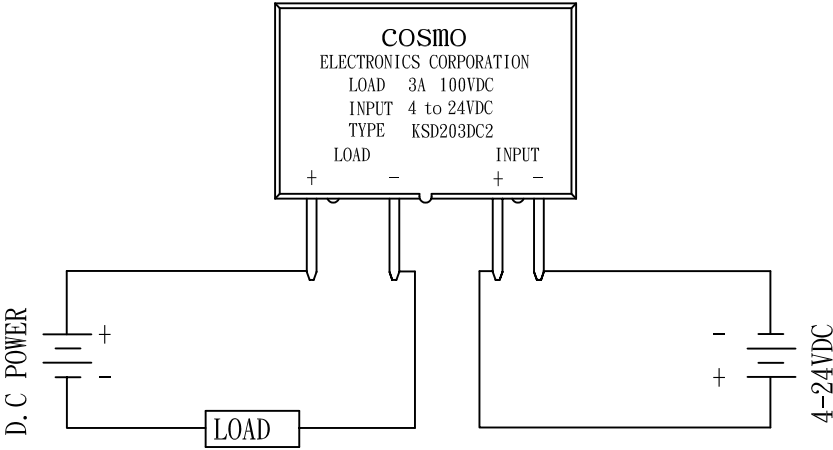
DATE: 10/13/04'

|                                  |                                 |              |        |
|----------------------------------|---------------------------------|--------------|--------|
| COSMO<br>ELECTRONICS CORPORATION | SOLID STATE RELAY:<br>KSD203DC2 | NO. 58021103 | REV. 3 |
|                                  |                                 | SHEET 1 OF 2 |        |

## 1. OUTSIDE DIMENSION : UNIT ( mm )



## 2. SCHEMATIC : TOP VIEW



# PRODUCT SPECIFICATION

DATE: 10/13/04'

|                                  |                                 |              |           |
|----------------------------------|---------------------------------|--------------|-----------|
| COSMO<br>ELECTRONICS CORPORATION | SOLID STATE RELAY:<br>KSD203DC2 | NO. 58021103 | REV.<br>3 |
|                                  |                                 | SHEET 2 OF 2 |           |

## 3. Absolute Maximum Ratings

| Parameter                   |                          | Symbol      | Rating  | Unit      |
|-----------------------------|--------------------------|-------------|---------|-----------|
| Input                       | Input signal voltage     | $V_{IN}$    | 4~24    | VDC       |
|                             | Drop-out voltage         | $V_{do}$    | 1       | VDC       |
| Output                      | Output power dissipation | $P_c$       | 30      | W         |
|                             | Collector voltage        | $V_{CEO}$   | 100     | V         |
|                             | Output current           | $I_o$       | 3       | A         |
| Peak surge current 50us     |                          | $I_{surge}$ | 9       | A         |
| Isolation voltage           |                          | $V_{iso}$   | 4000    | $V_{rms}$ |
| Operating temperature       |                          | $T_{opr}$   | -30~100 | °C        |
| Storage temperature         |                          | $T_{stg}$   | -30~125 | °C        |
| Soldering temperature 10sec |                          | $T_{sol}$   | 260     | °C        |

## 4. Electrical Characteristics

| Parameter                            |                                     | Symbol        | Conditions                                | MIN       | TYP | MAX | Unit     |
|--------------------------------------|-------------------------------------|---------------|-------------------------------------------|-----------|-----|-----|----------|
| Input                                | Pick-up voltage                     | $V_{pu}$      | $I_t=1A_{rms}$                            |           |     | 4   | VDC      |
|                                      | Input current                       | $I_{in}$      | $V_{in}=4-24V$                            |           |     | 25  | mA       |
|                                      | Terminal capacitance                | $C_T$         | $V=0, f=1KHz$                             |           | 30  |     | pF       |
| Output                               | Collector-emitter breakdown voltage | $BV_{CEO}$    | $I_F=0$                                   | 100       |     |     |          |
|                                      | Output leak current                 | $I_{leak}$    | $V=30V, I_F=0$                            |           |     | 15  | uA       |
| Collector current                    |                                     | $I_c$         | $I_F=1mA, V_{CE}=2V$                      | 0.05      |     | 3   | A        |
| Collector-emitter saturation voltage |                                     | $V_{CE(sat)}$ | $I_F=5mA, I_c=100mA$                      |           |     | 2.0 | V        |
| Isolation resistance                 |                                     | $R_{iso}$     | DC500V                                    | $10^{10}$ |     |     | $\Omega$ |
| Floating capacitance                 |                                     | $C_r$         | $V=0, f=1MHz$                             |           |     | 3   | pF       |
| Cut-off frequency                    |                                     | $F_c$         | $V_{CE}=2V, I_c=200mA$<br>$R_L=100\Omega$ | 2         |     |     | KHz      |
| Response time(Rise)                  |                                     | $T_r$         | $V_{CE}=2V, I_c=20mA$                     |           |     | 500 | uS       |
| Response time(Fall)                  |                                     | $T_f$         | $R_L=100\Omega$                           |           |     | 200 | uS       |