



## JSPK10100ACT-CO

### 10A Schottky Barrier Rectifier

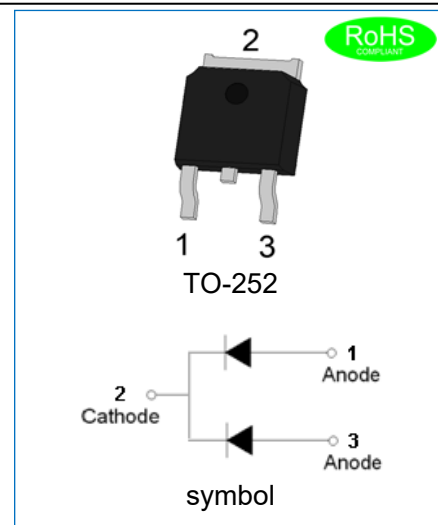
Rev.0.1

#### DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Low forward voltage drop
- ✧ Low power losses, high efficiency operation
- ✧ High current capability and surge capability

#### MECHANICAL DATA

- ✧ Case: TO-252 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002



#### ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter                                                                          | Symbol      | JSPK10100ACT-CO | Unit |
|------------------------------------------------------------------------------------|-------------|-----------------|------|
| Maximum repetitive peak reverse voltage                                            | $V_{RRM}$   | 100             | V    |
| Maximum RMS voltage                                                                | $V_{RMS}$   | 70              | V    |
| Maximum DC blocking voltage                                                        | $V_{DC}$    | 100             | V    |
| Average forward current                                                            | $I_{F(AV)}$ | 10              | A    |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$   | 100             | A    |
| Operating junction temperature range                                               | $T_j$       | -55 to +150     | °C   |
| Storage temperature range                                                          | $T_{stg}$   | -55 to +150     | °C   |

#### ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

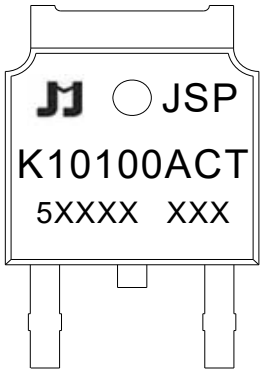
| Parameter            |                              | Symbol | Min | Typ | Max  | Unit |
|----------------------|------------------------------|--------|-----|-----|------|------|
| Forward voltage      | $I_F=5A$                     | $V_F$  |     |     | 0.85 | V    |
| Reverse current      | $V_R=100V, T_A=25^{\circ}C$  | $I_R$  |     |     | 0.1  | mA   |
|                      | $V_R=100V, T_A=100^{\circ}C$ |        |     |     | 20   |      |
| Junction capacitance | $V_R=4.0V, f=1MHz$           | $C_J$  |     | 112 |      | pF   |

#### THERMAL RESISTANCES

| Symbol        | Parameter                                | JSPK10100ACT-CO | Unit |
|---------------|------------------------------------------|-----------------|------|
| $R_{th(j-c)}$ | Thermal resistance from junction to case | 6.5             | °C/W |



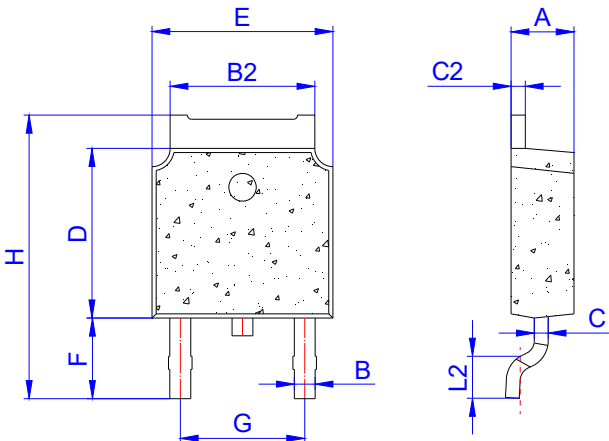
MARKING



|     |                            |
|-----|----------------------------|
| JS  | Schottky Barrier Rectifier |
| P   | Planar technology          |
| K   | Package: TO-252            |
| 10  | $I_{F(AV)}=10A$            |
| 100 | $V_{RRM}:100V$             |
| A   | Version                    |
| CT  | Common cathode             |

|     |                             |
|-----|-----------------------------|
| 5   | Year code(4:2024,5:2025,……) |
| XX  | Week code                   |
| XX  | Chip code                   |
| XXX | Package lot number          |

PACKAGE MECHANICAL DATA

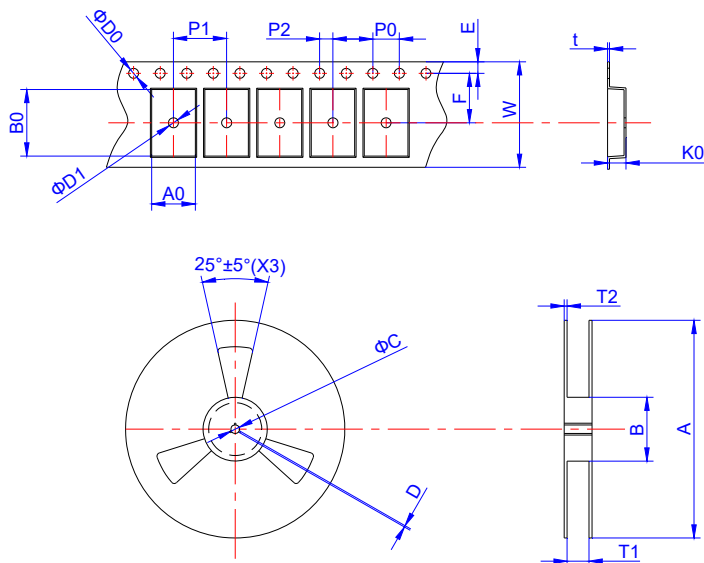


TO-252

| Ref. | Dimensions  |       |       |        |       |       |
|------|-------------|-------|-------|--------|-------|-------|
|      | Millimeters |       |       | Inches |       |       |
|      | Min.        | Typ.  | Max.  | Min.   | Typ.  | Max.  |
| A    | 2.10        | 2.30  | 2.50  | 0.083  | 0.091 | 0.098 |
| B    | 0.66        | 0.76  | 0.86  | 0.026  | 0.030 | 0.034 |
| B2   | 4.98        | 5.28  | 5.58  | 0.196  | 0.208 | 0.220 |
| C    | 0.405       | 0.505 | 0.605 | 0.016  | 0.020 | 0.024 |
| C2   | 0.37        | 0.52  | 0.67  | 0.015  | 0.020 | 0.026 |
| D    | 5.80        | 6.10  | 6.40  | 0.228  | 0.240 | 0.252 |
| E    | 6.30        | 6.60  | 6.90  | 0.248  | 0.260 | 0.272 |
| F    | 2.655       | 2.905 | 3.155 | 0.105  | 0.114 | 0.124 |
| G    |             | 4.54  |       |        | 0.179 |       |
| H    | 9.90        | 10.20 | 10.50 | 0.390  | 0.402 | 0.413 |
| L2   |             | 2.00  |       |        | 0.079 |       |



TAPE AND REEL SPECIFICATION-TO-252



| Ref. | Dimensions                              |                                           |
|------|-----------------------------------------|-------------------------------------------|
|      | Millimeters                             | Inches                                    |
| W    | 16.00±0.30                              | 0.630±0.012                               |
| E    | 1.75±0.10                               | 0.069±0.004                               |
| F    | 7.50±0.10                               | 0.295±0.004                               |
| D0   | 1.50±0.10                               | 0.059±0.004                               |
| D1   | 1.50±0.10                               | 0.059±0.004                               |
| P0   | 4.00±0.10                               | 0.157±0.004                               |
| 10P0 | 40.00±0.20                              | 1.575±0.008                               |
| P1   | 8.00±0.10                               | 0.315±0.004                               |
| P2   | 2.00±0.10                               | 0.079±0.004                               |
| A0   | 6.96±0.10                               | 0.274±0.004                               |
| B0   | 10.49±0.10                              | 0.413±0.004                               |
| K0   | 2.77±0.10                               | 0.109±0.004                               |
| t    | 0.30±0.05                               | 0.012±0.002                               |
| A    | 330.00±2.00                             | 12.992±0.079                              |
| T1   | 16.50 <sup>+2.00</sup> <sub>-1.00</sub> | 0.650 <sup>+0.079</sup> <sub>-0.039</sub> |
| B    | 96.70±1.00                              | 3.807±0.039                               |
| T2   | 2.20±0.20                               | 0.087±0.008                               |
| C    | 13.00±0.30                              | 0.512±0.012                               |
| D    | 2.30±0.30                               | 0.091±0.012                               |

PACKAGE INFORMATION-TO-252

| PART No.          | UNIT WEIGHT<br>(g/PCS) TYP | TUBE<br>(PCS) | PER CARTON<br>(PCS) |
|-------------------|----------------------------|---------------|---------------------|
| JSPK10100ACT-CO   | 0.31                       | 80            | 20,000              |
| PART No.          | UNIT WEIGHT<br>(g/PCS) TYP | REEL<br>(PCS) | PER CARTON<br>(PCS) |
| JSPK10100ACT-CO-R | 0.31                       | 3,000         | 30,000              |



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