



## JSPE30150ACT-CO

### 30A Schottky Barrier Rectifier

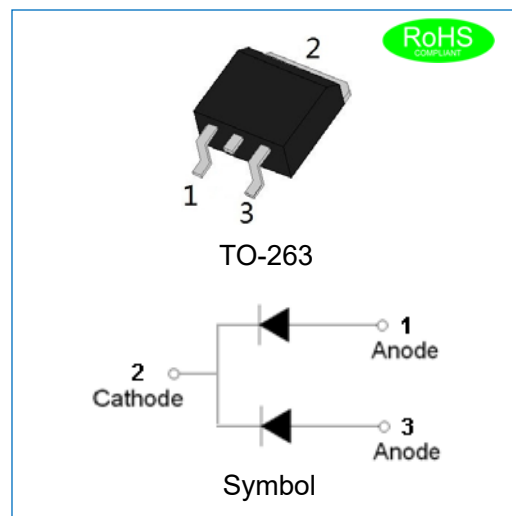
Rev.0.1

#### DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ For surface mounted applications in order to optimize board space
- ✧ 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-263 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002



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

| Parameter                                                                          | Symbol      | JSPE30150ACT-CO | Unit |
|------------------------------------------------------------------------------------|-------------|-----------------|------|
| Maximum repetitive peak reverse voltage                                            | $V_{RRM}$   | 150             | V    |
| Maximum RMS voltage                                                                | $V_{RMS}$   | 105             | V    |
| Maximum DC blocking voltage                                                        | $V_{DC}$    | 150             | V    |
| Average forward current                                                            | $I_{F(AV)}$ | 30              | A    |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$   | 200             | 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.)

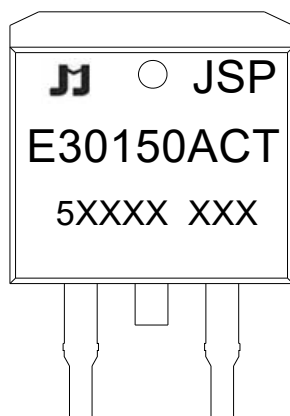
| Parameter            | Symbol                               | Min | Typ | Max  | Unit |
|----------------------|--------------------------------------|-----|-----|------|------|
| Forward voltage      | $I_F=15A$<br>$V_F$                   |     |     | 0.90 | V    |
| Reverse current      | $V_R=150V, T_A=25^{\circ}C$<br>$I_R$ |     |     | 0.1  | mA   |
|                      | $V_R=150V, T_A=100^{\circ}C$         |     |     | 20   |      |
| Junction capacitance | $V_R=4.0V, f=1MHz$<br>$C_J$          |     | 350 |      | pF   |

#### THERMAL RESISTANCES

| Symbol        | Parameter                                 | JSPE30150ACT-CO | Unit |
|---------------|-------------------------------------------|-----------------|------|
| $R_{th(j-c)}$ | Thermal resistances from junction to case | 2.0             | °C/W |



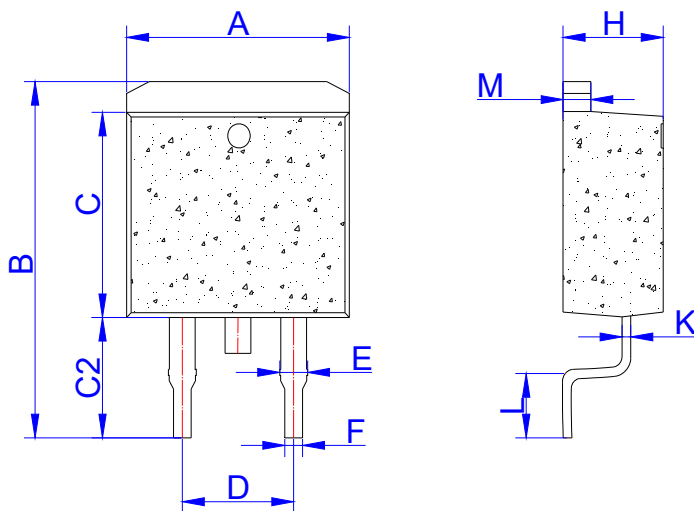
## MARKING



|     |                            |
|-----|----------------------------|
| JS  | Schottky Barrier Rectifier |
| P   | Planar technology          |
| E   | Package: TO-263            |
| 30  | $I_{F(AV)}=30A$            |
| 150 | $V_{RRM}:150V$             |
| A   | Version                    |
| CT  | Common cathode             |

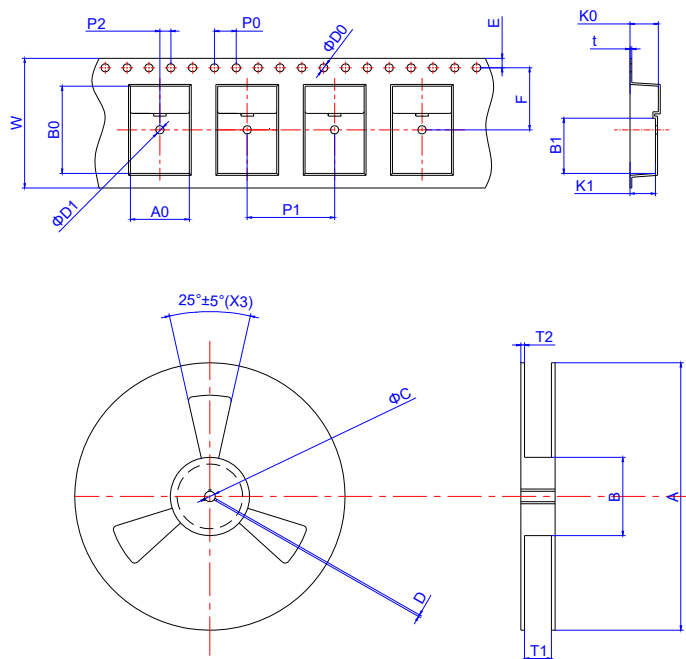
|     |                                |
|-----|--------------------------------|
| 5   | Year code(4:2024,5:2025,.....) |
| XX  | Week code                      |
| XX  | Chip code                      |
| XXX | Package lot number             |

## PACKAGE MECHANICAL DATA



TO-263

| Ref. | Dimensions  |       |       |        |       |       |
|------|-------------|-------|-------|--------|-------|-------|
|      | Millimeters |       |       | Inches |       |       |
|      | Min.        | Typ.  | Max.  | Min.   | Typ.  | Max.  |
| A    | 9.91        | 10.16 | 10.41 | 0.390  | 0.400 | 0.410 |
| B    | 14.65       | 15.10 | 15.55 | 0.577  | 0.594 | 0.612 |
| C    | 8.50        | 8.70  | 8.90  | 0.335  | 0.343 | 0.350 |
| C2   | 4.70        | 5.10  | 5.50  | 0.185  | 0.201 | 0.217 |
| D    |             | 5.08  |       |        | 0.200 |       |
| E    | 1.12        | 1.27  | 1.42  | 0.044  | 0.050 | 0.056 |
| F    | 0.66        | 0.81  | 0.96  | 0.026  | 0.032 | 0.038 |
| H    | 4.32        | 4.57  | 4.82  | 0.170  | 0.180 | 0.190 |
| K    | 0.28        | 0.40  | 0.52  | 0.011  | 0.016 | 0.020 |
| L    |             | 3.00  |       |        | 0.118 |       |
| M    | 1.12        | 1.27  | 1.42  | 0.044  | 0.050 | 0.056 |

**TAPE AND REEL SPECIFICATION-TO-263**

| Ref. | Dimensions                              |                                           |
|------|-----------------------------------------|-------------------------------------------|
|      | Millimeters                             | Inches                                    |
| W    | 24.00±0.30                              | 0.945±0.012                               |
| E    | 1.75±0.10                               | 0.069±0.004                               |
| F    | 11.50±0.10                              | 0.453±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   | 16.00±0.10                              | 0.630±0.004                               |
| P2   | 2.00±0.10                               | 0.079±0.004                               |
| A0   | 10.80±0.10                              | 0.425±0.004                               |
| B0   | 16.13±0.10                              | 0.635±0.004                               |
| B1   | 10.24±0.20                              | 0.403±0.004                               |
| K0   | 5.21±0.10                               | 0.205±0.004                               |
| K1   | 4.70±0.10                               | 0.185±0.004                               |
| t    | 0.35±0.05                               | 0.014±0.002                               |
| A    | 330.00±2.00                             | 12.992±0.079                              |
| T1   | 24.50 <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-263**

| PART No.          | UNIT WEIGHT<br>(g/PCS) TYP | TUBE<br>(PCS) | PER CARTON<br>(PCS) |
|-------------------|----------------------------|---------------|---------------------|
| JSPE30150ACT-CO   | 1.41                       | 50            | 5,000               |
| PART No.          | UNIT WEIGHT<br>(g/PCS) TYP | REEL<br>(PCS) | PER CARTON<br>(PCS) |
| JSPE30150ACT-CO-R | 1.41                       | 800           | 8,000               |



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