



JECR1602ECT EPI HYPERFAST RECOVERY RECTIFIER

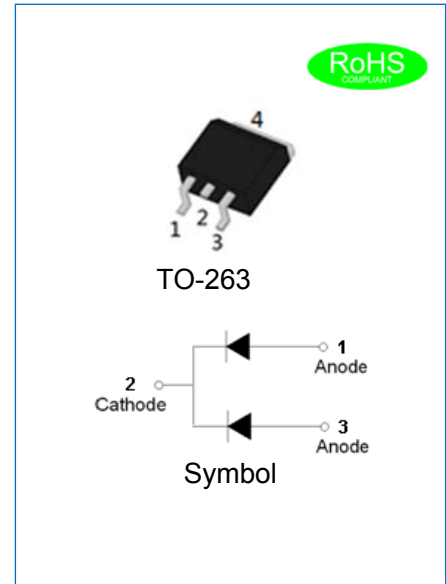
Rev.1.3

DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Hyperfast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for switching power supplies, inverters and as free wheeling diodes

MECHANICAL DATA

- ✧ Case: TO-263 molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight: 1.55gram



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

| Parameter | Symbol | JECR1602ECT | Unit |
|---|----------------|-------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 200 | V |
| Maximum RMS voltage | V_{RMS} | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 200 | V |
| Average forward current at $T_C=125^\circ\text{C}$ | $I_{F(AV)}$ | 16 | A |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load(per diode) | I_{FSM} | 100 | A |
| Junction temperature and storage temperature range | T_j, T_{stg} | -55 to +175 | °C |

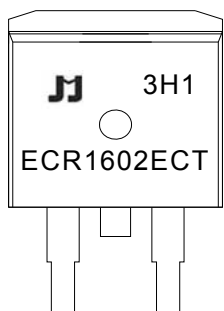
ELECTRICAL CHARACTERISTICS(Rating at 25°C case temperature unless otherwise specified.)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|--|----------|------|------|------|---------------|
| Forward voltage @ $I_F=8\text{A}$ | V_F | - | - | 1.1 | V |
| | | | | 1.0 | |
| Reverse current at rated DC blocking voltage | I_R | - | - | 5 | μA |
| | | | | 200 | |
| Reverse recovery time | t_{rr} | - | - | 35 | ns |
| | | | | 25 | |

THERMAL RESISTANCES

| Symbol | Parameter | Min. | Typ. | Max. | Unit |
|---------------|---|------|------|------|------|
| $R_{th(j-c)}$ | Thermal resistance from junction to case | - | - | 3 | °C/W |
| $R_{th(j-a)}$ | Thermal resistance from junction to ambient | - | - | 50 | °C/W |

MARKING



| | |
|-----|----------------------------------|
| ECR | EPI Hyperfast Recovery Rectifier |
| 16 | $I_{F(AV)}=16A$ |
| 02 | $V_{RRM}:200V$ |
| E | Package:TO-263 |
| CT | Common cathode |

$\underline{x}H1$: Month, 1、2、3 ~ 9、A、B、C

$3\underline{x}1$:

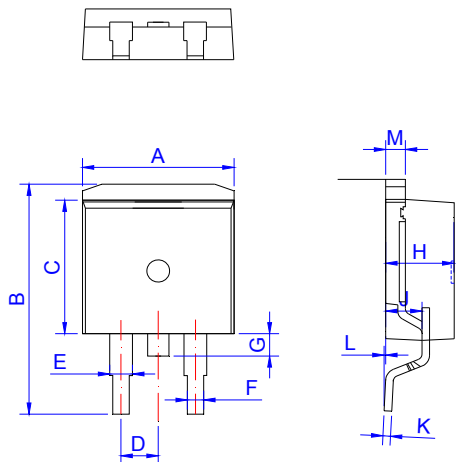
| | | | | | | |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H | I | J | K | L | M | N |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ... |
| O | P | Q | R | S | T | ... |

$3H\underline{x}$: Batch number

ORDERING INFORMATION

| | | | | | | | | |
|----------------------------|-------------------|-----------|-----------------|-----------|----------------|----------------|----------------|------------------------------|
| J | E | C | R | 16 | 02 | E | CT | -R |
| JIEJIE Microelectronics | Epi Hyper fast | Rectifier | $I_{F(AV)}=16A$ | | $V_{RRM}:200V$ | Package:TO-263 | Common cathode | Null:Tube R:Tape and reel |

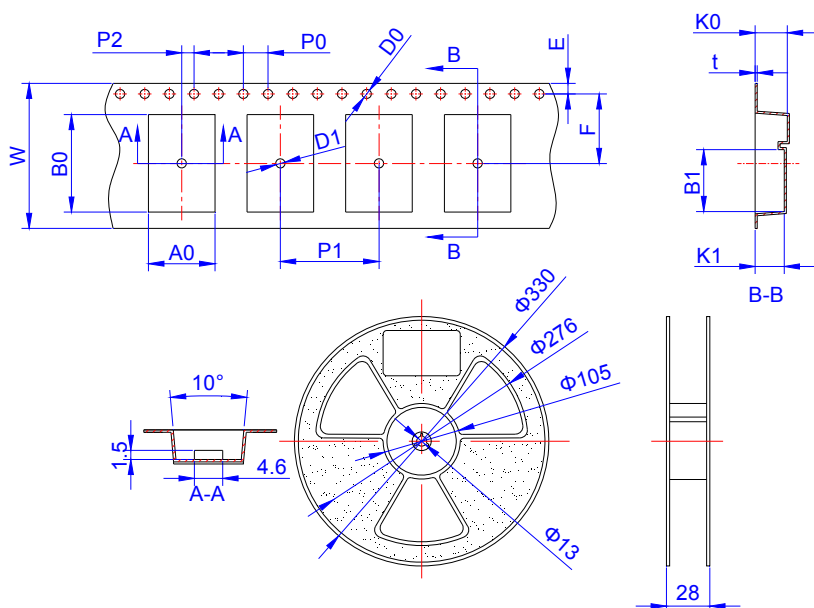
PACKAGE MECHANICAL DATA



TO-263

| Ref. | Dimensions | | | | | |
|------|-------------|------|-------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 9.90 | | 10.20 | 0.390 | | 0.402 |
| B | 14.70 | | 15.80 | 0.579 | | 0.622 |
| C | 8.80 | | 9.60 | 0.346 | | 0.378 |
| D | | 2.54 | | | 0.100 | |
| E | 1.20 | | 1.40 | 0.047 | | 0.055 |
| F | 0.75 | | 0.85 | 0.030 | | 0.033 |
| G | | | 1.75 | | | 0.069 |
| H | 4.40 | | 4.70 | 0.173 | | 0.185 |
| J | 2.30 | | 2.70 | 0.091 | | 0.106 |
| K | 0.38 | | 0.55 | 0.015 | | 0.022 |
| L | 0 | 0.10 | 0.25 | 0 | 0.004 | 0.010 |
| M | 1.17 | | 1.37 | 0.046 | | 0.054 |

TAPE AND REEL SPECIFICATION-TO-263

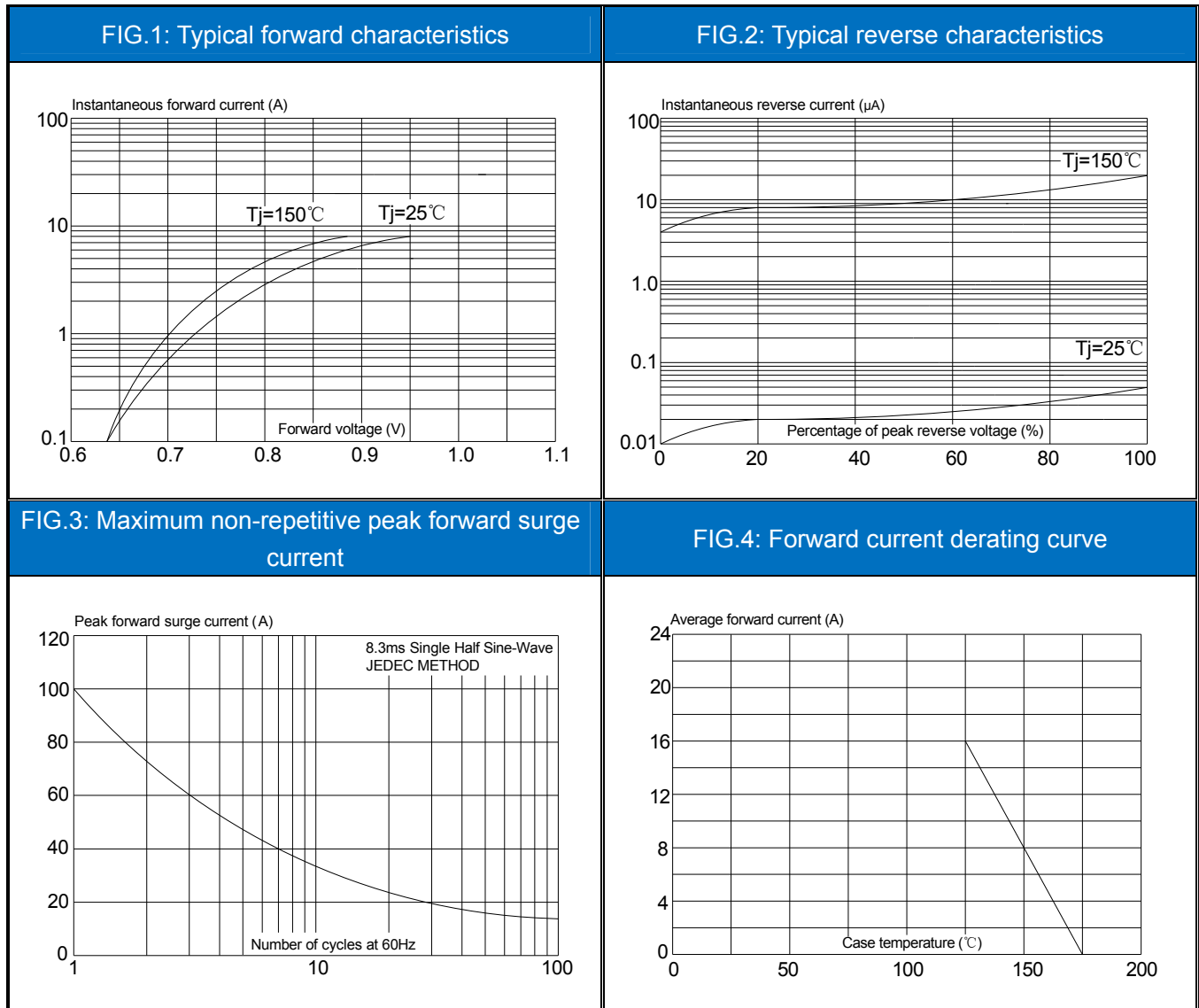


| Ref. | Dimensions | |
|------|-------------|-------------|
| | Millimeters | Inches |
| W | 24.00±0.30 | 0.945±0.012 |
| E | 1.75±0.10 | 0.069±0.004 |
| F | 11.50±0.10 | 0.453±0.004 |
| D0 | 1.50±0.10 | 0.059±0.004 |
| D1 | 1.50±0.10 | 0.059±0.004 |
| P0 | 4.00±0.10 | 0.157±0.004 |
| P1 | 16.00±0.10 | 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±0.008 |
| 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 |

PACKAGE INFORMATION-TO-263

| PART No. | UNIT WEIGHT (g/PCS) typ. | TUBE (PCS) | PER CARTON (PCS) |
|---------------|--------------------------|------------|------------------|
| JECR1602ECT | 1.55 | 50 | 5,000 |
| PART No. | UNIT WEIGHT (g/PCS) typ. | REEL (PCS) | PER CARTON (PCS) |
| JECR1602ECT-R | 1.55 | 800 | 8,000 |

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