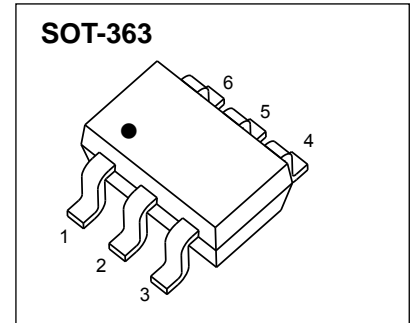


SOT-363 Plastic-Encapsulate MOSFETs

CJ3134KDW Dual N-Channel MOSFET

| $V_{(BR)DSS}$ | $R_{DS(on)MAX}$ | I_D |
|---------------|-----------------|-------|
| 20V | 380mΩ@4.5V | 0.75A |
| | 450mΩ@2.5V | |
| | 800mΩ@1.8V | |



FEATURE

- Lead Free Product is Acquired
- Surface Mount Package
- N-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive
- Equivalent to Two CJ3134K

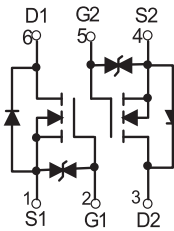
APPLICATION

- Load/Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

MARKING



Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-----------|--------------------|
| Drain-source voltage | V_{DS} | 20 | V |
| Typical Gate-source voltage | V_{GS} | ±12 | V |
| Continuous drain current ($t \leq 10\text{s}$) | I_D | 0.75 | A |
| Power dissipation* | P_D | 0.15 | W |
| Thermal resistance from junction to ambient | $R_{\theta JA}$ | 833 | $^\circ\text{C/W}$ |
| Junction temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55~ +150 | $^\circ\text{C}$ |

* Repetitive rating : Pulse width limited by junction temperature.

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$ unless otherwise specified

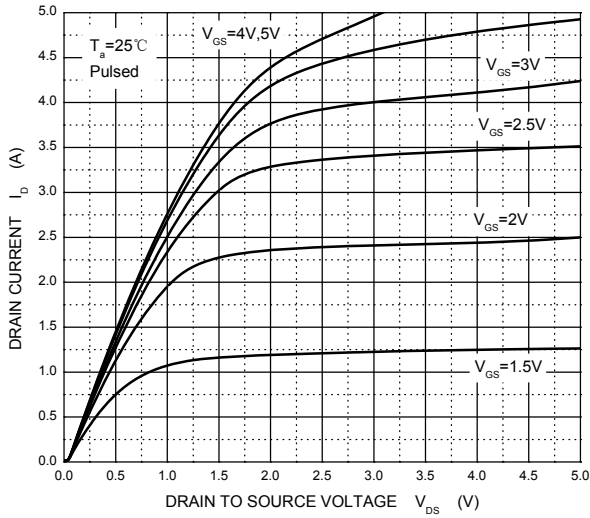
| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|-------------------------------------|---------------|---|------|------|----------|-----------|
| STATIC PARAMETERS | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = 250\mu A$ | 20 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = 20V, V_{GS} = 0V$ | | | 1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 10V, V_{DS} = 0V$ | | | ± 20 | μA |
| Gate threshold voltage (note 1) | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = 250\mu A$ | 0.35 | 0.54 | 1.1 | V |
| Drain-source on-resistance (note 1) | $R_{DS(on)}$ | $V_{GS} = 4.5V, I_D = 0.65A$ | | 270 | 380 | $m\Omega$ |
| | | $V_{GS} = 2.5V, I_D = 0.55A$ | | 320 | 450 | $m\Omega$ |
| | | $V_{GS} = 1.8V, I_D = 0.45A$ | | 390 | 800 | $m\Omega$ |
| Forward tranconductance (note 1) | g_{FS} | $V_{DS} = 10V, I_D = 0.8A$ | | 1.6 | | S |
| Diode forward voltage(note 1) | V_{SD} | $I_S = 0.15A, V_{GS} = 0V$ | | | 1.2 | V |
| DYNAMIC PARAMETERS (note 2) | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS} = 16V, V_{GS} = 0V, f = 1MHz$ | | 79 | 120 | pF |
| Output Capacitance | C_{oss} | | | 13 | 20 | pF |
| Reverse Transfer Capacitance | C_{rss} | | | 9 | 15 | pF |
| SWITCHING PARAMETERS(note 2) | | | | | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{GS} = 4.5V, V_{DS} = 10V, I_D = 0.5A, R_{GEN} = 10\Omega$ | | 6.7 | | ns |
| Turn-on rise time | t_r | | | 4.8 | | ns |
| Turn-off delay time | $t_{d(off)}$ | | | 17.3 | | ns |
| Turn-off fall time | t_f | | | 7.4 | | ns |
| Total Gate Charge | Q_g | $V_{DS} = 10V, V_{GS} = 4.5V, I_D = 0.25A$ | | 750 | | pC |
| Gate-Source Charge | Q_{gs} | | | 75 | | pC |
| Gate-Drain Charge | Q_{gd} | | | 225 | | pC |

Notes :

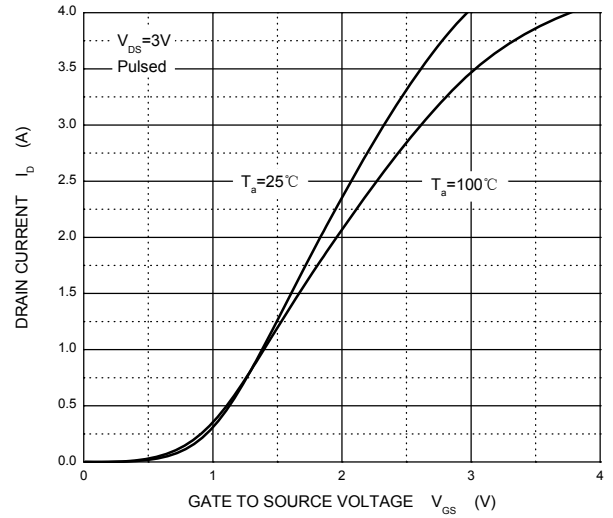
1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycles $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.

Typical Characteristics

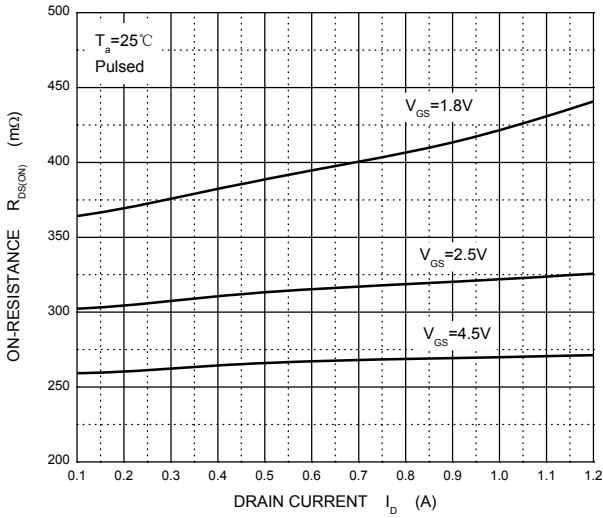
Output Characteristics



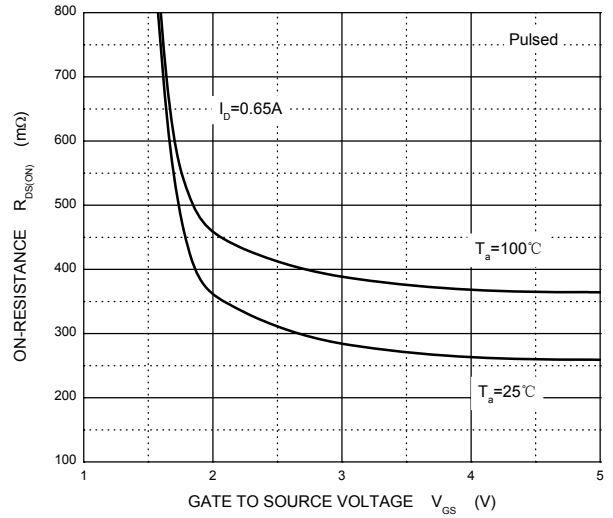
Transfer Characteristics



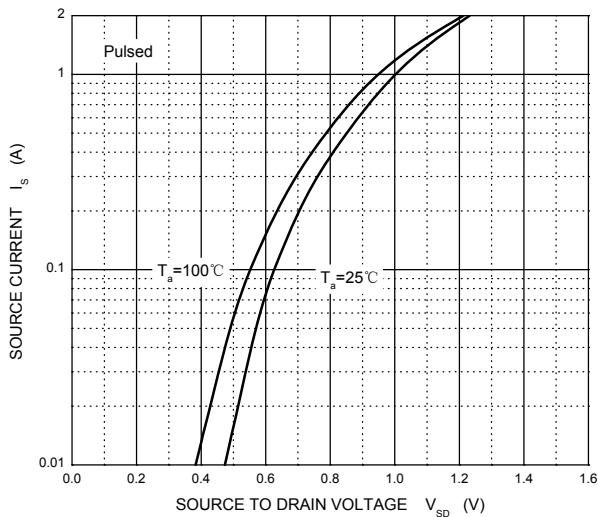
$R_{DS(ON)}$ — I_D



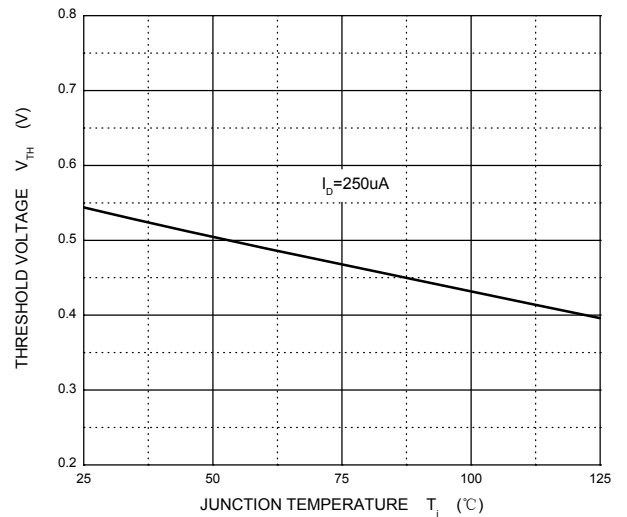
$R_{DS(ON)}$ — V_{GS}



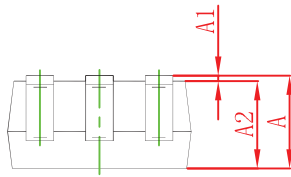
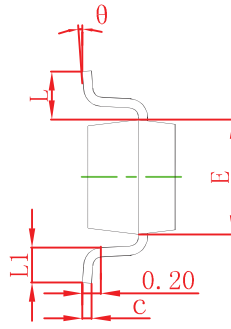
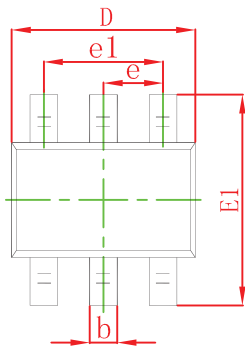
I_S — V_{SD}



Threshold Voltage

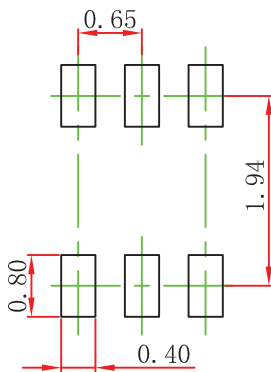


SOT-363 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.100 | 0.150 | 0.004 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.400 | 0.085 | 0.094 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

SOT-363 Suggested Pad Layout



Note:

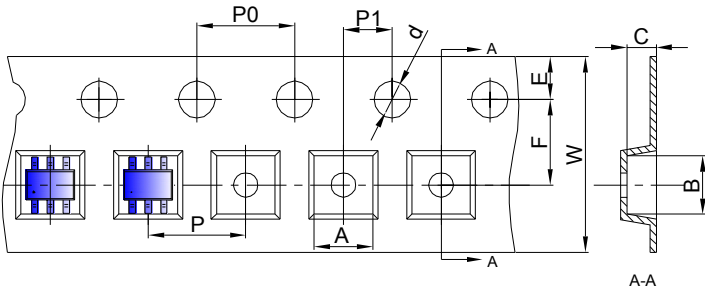
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-363 Tape and Reel

SOT-363 Embossed Carrier Tape

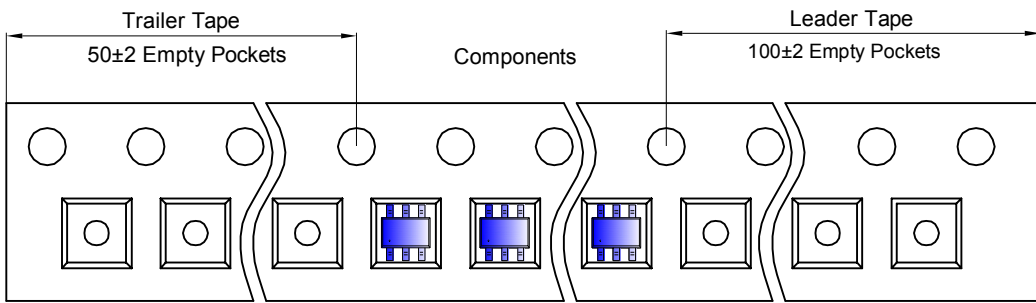


Packaging Description:

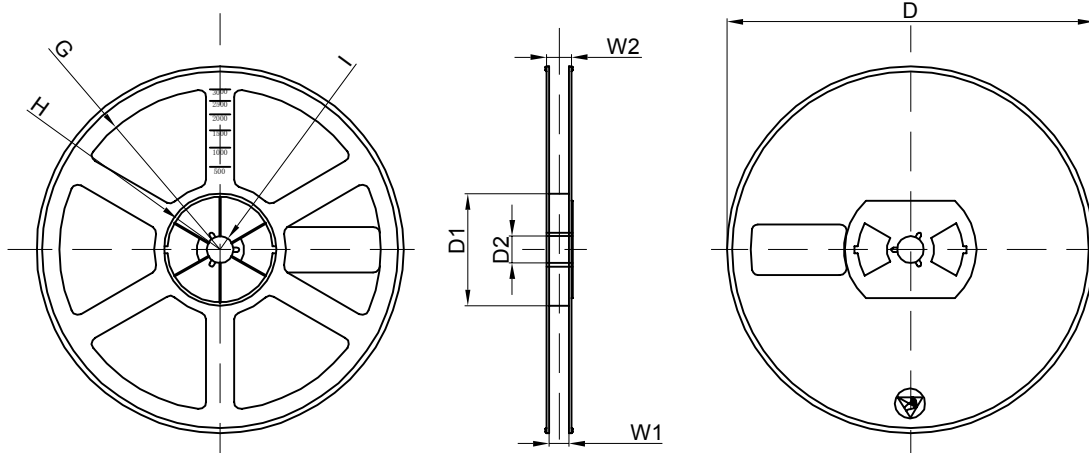
SOT-363 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-363 | 2.25 | 2.55 | 1.20 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-363 Tape Leader and Trailer



SOT-363 Reel



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
| 7"Dia | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch | 30,000 pcs | 203×203×195 | 120,000 pcs | 438×438×220 | |