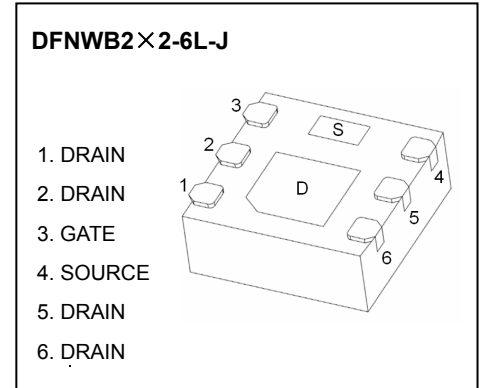


CJMP3009 P-Channel Enhancement Mode Field Effect Transistor

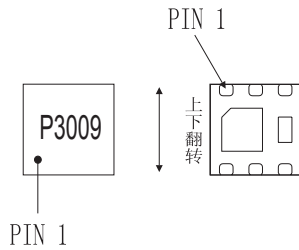
| $V_{(BR)DSS}$ | $R_{DS(on)MAX}$ | I_D |
|---------------|-----------------|-------|
| -30V | 28mΩ@-4.5V | -9A |
| | 40mΩ@-2.5V | |



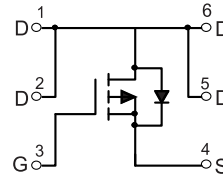
General Description

The CJMP3009 uses advanced trench technology to provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use as a load switch or in PWM applications.

MARKING



Equivalent Circuit



Maximum ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------|----------|---------------------------|
| Drain-Source Voltage | V_{DS} | -30 | V |
| Gate-Source Voltage | V_{GS} | ± 12 | V |
| Continuous Drain Current | I_D | -9 | A |
| Power Dissipation | P_D | 750 | mW |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 165 | $^\circ\text{C}/\text{W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55~+150 | $^\circ\text{C}$ |

MOSFET ELECTRICAL CHARACTERISTICS

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

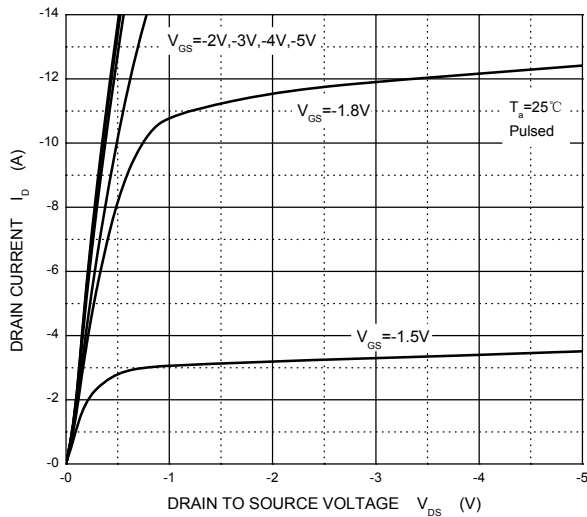
| Parameter | Symbol | Test Condition | Min | Typ | Max | Units |
|---|--------------|---|------|------|-----------|------------|
| Static characteristics | | | | | | |
| Drain-source breakdown voltage | BV_{DSS} | $V_{GS} = 0V, I_D = -250\mu A$ | -30 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = -30V, V_{GS} = 0V$ | | | -1 | μA |
| Gate-source leakage current | I_{GSS} | $V_{GS} = \pm 12V, V_{DS} = 0V$ | | | ± 100 | nA |
| Drain-source on-resistance (note 1) | $R_{DS(on)}$ | $V_{GS} = -4.5V, I_D = -9A$ | | 20 | 28 | m Ω |
| | | $V_{GS} = -2.5V, I_D = -6A$ | | 27 | 40 | m Ω |
| Forward transconductance (note 1) | g_{FS} | $V_{DS} = -5V, I_D = -9A$ | | 24 | | S |
| Gate threshold voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = -250\mu A$ | -0.6 | -0.9 | -1.5 | V |
| Diode forward voltage (note 1) | V_{SD} | $I_S = -2A, V_{GS} = 0V$ | | | -1.2 | V |
| Dynamic characteristics (note 2) | | | | | | |
| Input capacitance | C_{iss} | $V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$ | | 780 | | pF |
| Output capacitance | C_{oss} | | | 150 | | pF |
| Reverse transfer capacitance | C_{rss} | | | 98 | | pF |
| Switching Characteristics (note 2) | | | | | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{GS} = -4.5V, V_{DS} = -6V,$ $I_D = -9A, R_{GEN} = 6\Omega$ | | 11 | | ns |
| Turn-on rise time | t_r | | | 8 | | ns |
| Turn-off delay time | $t_{d(off)}$ | | | 28.5 | | ns |
| Turn-off fall time | t_f | | | 10.5 | | ns |
| Total gate charge | Q_g | $V_{GS} = -4.5V, V_{DS} = -6V,$ $I_D = -9A$ | | 13.8 | | nC |
| TGate-source charge | Q_{gs} | | | 2.5 | | nC |
| TGate-drain charge | Q_{gd} | | | 3.3 | | nC |

Notes:

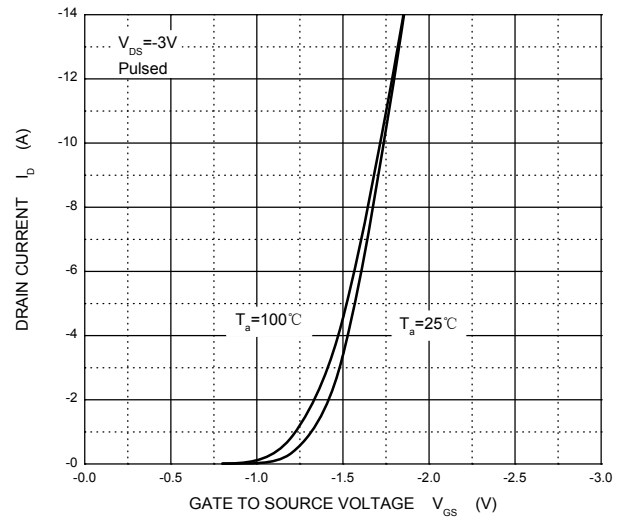
1. Pulse test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.

Typical Characteristics

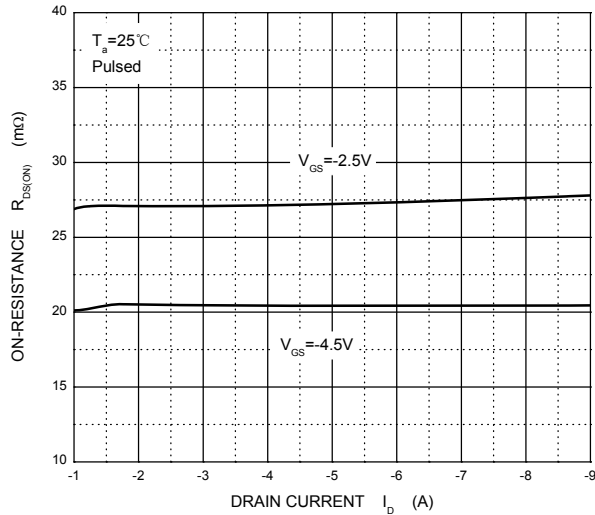
Output Characteristics



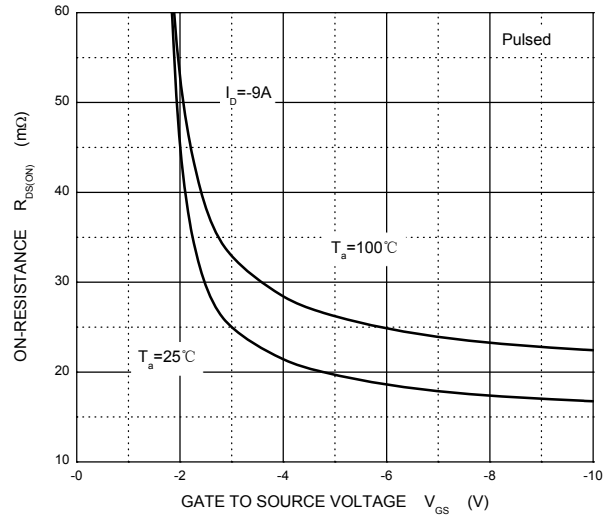
Transfer Characteristics



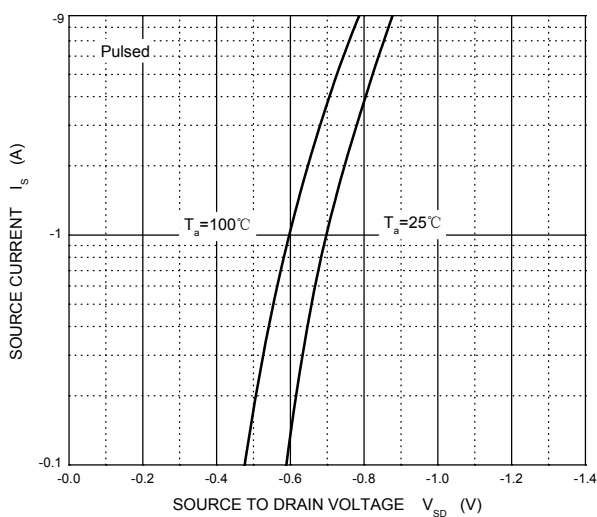
$R_{DS(ON)}$ — I_D



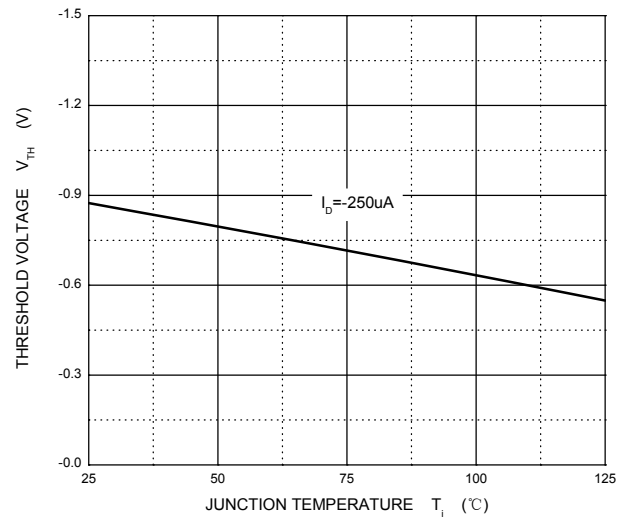
$R_{DS(ON)}$ — V_{GS}



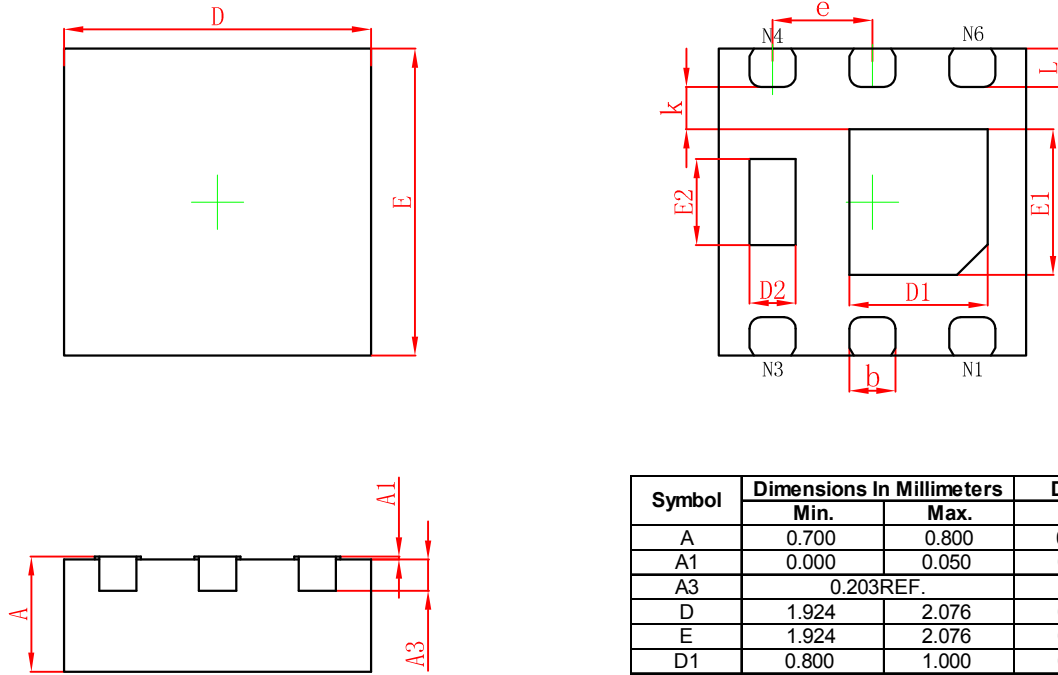
I_S — V_{SD}



Threshold Voltage

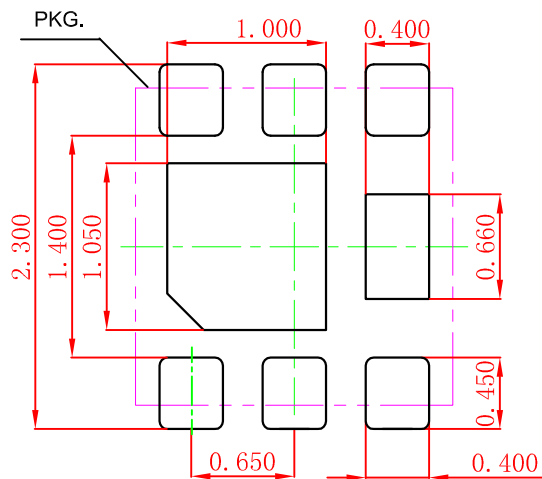


DFNWB2X2-6L-J Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.700 | 0.800 | 0.028 | 0.032 |
| A1 | 0.000 | 0.050 | 0.000 | 0.002 |
| A3 | 0.203REF. | | 0.008REF. | |
| D | 1.924 | 2.076 | 0.076 | 0.082 |
| E | 1.924 | 2.076 | 0.076 | 0.082 |
| D1 | 0.800 | 1.000 | 0.031 | 0.039 |
| E1 | 0.850 | 1.050 | 0.033 | 0.041 |
| D2 | 0.200 | 0.400 | 0.008 | 0.016 |
| E2 | 0.460 | 0.660 | 0.018 | 0.026 |
| k | 0.200MIN. | | 0.008MIN. | |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| e | 0.650TYP. | | 0.026TYP. | |
| L | 0.174 | 0.326 | 0.007 | 0.013 |

DFNWB2X2-6L-J Suggested Pad Layout



Note:

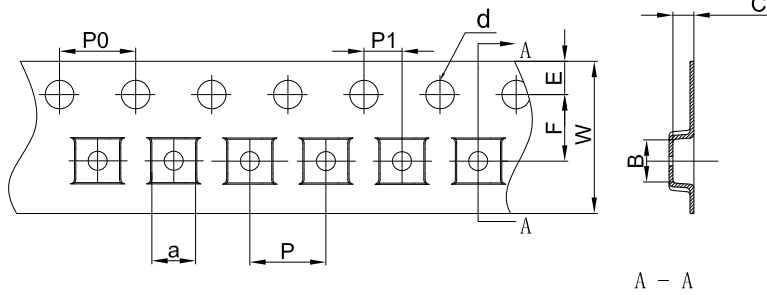
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.050 mm.
3. The pad layout is for reference purposes only.

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.

DFNWB2X2-6L Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape



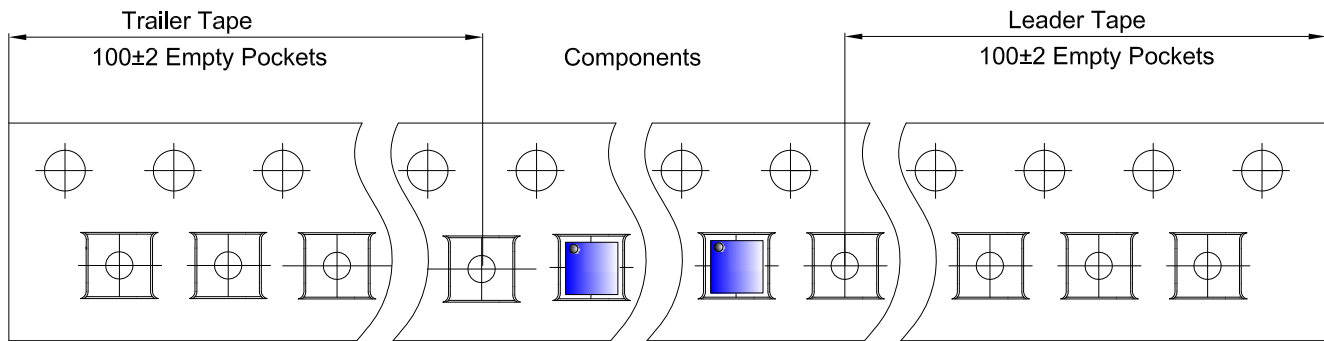
Packaging Description:

DFNWB2×2-6L 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 18.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

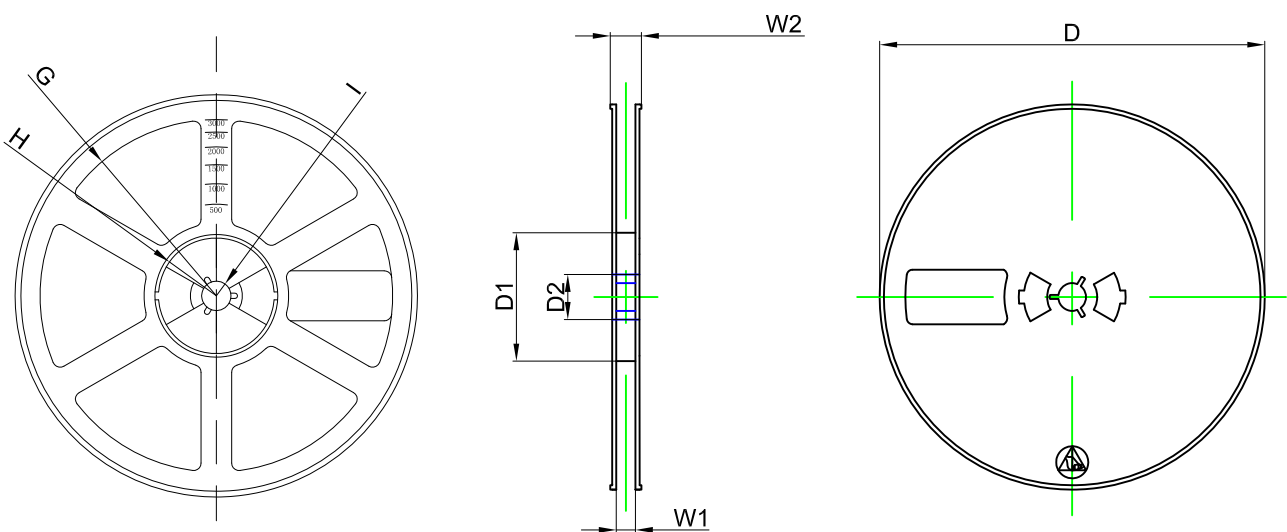
Dimensions are in millimeter

| Pkg type | a | B | C | d | E | F | P0 | P | P1 | W |
|-------------|------|------|------|-------|------|------|------|------|------|------|
| DFNWB2×2-6L | 2.30 | 2.30 | 1.10 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

DFNWB2×2-6L Tape Leader and Trailer



DFNWB2×2-6L Reel



Dimensions are in millimeter

| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
|-------------|---------|-------|-------|--------|--------|-------|------|-------|
| 7" Dia | Ø180.00 | 60.00 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 13.10 |

| 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 | |