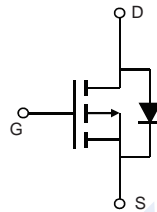
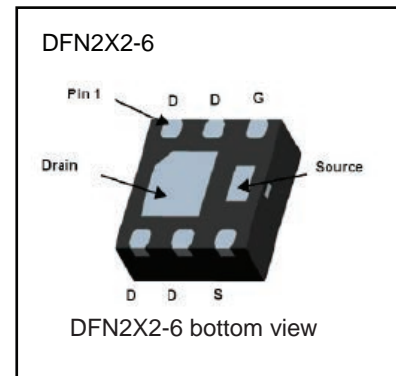


P-channel MOSFET

2KJ6053DFN

■ Features

- V_{DS} -20V
- I_D (at $V_{GS}=-4.5V$) -4A
- $R_{DS(ON)}$ (at $V_{GS}=-4.5V$) < 100m Ω
- $R_{DS(ON)}$ (at $V_{GS}=-2.5V$) < 140m Ω

■ Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

| Parameter | Symbol | Rating | Unit | |
|---|-----------------|------------------------|---------------------------|---|
| Drain-Source Voltage | V_{DS} | -20 | V | |
| Gate-Source Voltage | V_{GS} | ± 8 | | |
| Continuous Drain Current | I_D | $T_A=25^\circ\text{C}$ | -4 | A |
| | | $T_A=70^\circ\text{C}$ | -2.4 | |
| Pulsed Drain Current | I_{DM} | -14 | | |
| Power Dissipation | P_D | $T_A=25^\circ\text{C}$ | 0.7 | W |
| | | $T_A=70^\circ\text{C}$ | 0.45 | |
| Thermal Resistance.Junction- to-Ambient | $R_{\theta JA}$ | 175 | $^\circ\text{C}/\text{W}$ | |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ | |
| Storage Temperature Range | T_{stg} | -55 to 150 | | |

P-channel MOSFET

2KJ6053DFN

■ Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------------|--------------|--|------|-----|-----------|---------------|
| Drain-Source Breakdown Voltage | BV_{DSS} | $I_D = -250\mu\text{A}$, $V_{GS} = 0\text{V}$ | -20 | | | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS} = -20\text{V}$, $V_{GS} = 0\text{V}$ | | | -1 | μA |
| | | $V_{DS} = -20\text{V}$, $V_{GS} = 0\text{V}$, $T_J = 55^\circ\text{C}$ | | | -5 | |
| Gate-Body Leakage Current | I_{GSS} | $V_{DS} = 0\text{V}$, $V_{GS} = \pm 8\text{V}$ | | | ± 100 | nA |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}$, $I_D = -250\mu\text{A}$ | -0.4 | | -1.0 | V |
| Static Drain-Source On-Resistance * | $R_{DS(on)}$ | $V_{GS} = -4.5\text{V}$, $I_D = -2.8\text{A}$ | | | 100 | m Ω |
| | | $V_{GS} = -2.5\text{V}$, $I_D = -2\text{A}$ | | | 140 | |
| Input Capacitance | C_{iss} | $V_{GS}=0\text{V}$, $V_{DS} = -15\text{V}$, $f = 1\text{MHz}$ | | 480 | | pF |
| Output Capacitance | C_{oss} | | | 46 | | |
| Reverse Transfer Capacitance | C_{rss} | | | 10 | | |
| Total Gate Charge | Q_g | $V_{DS} = -6\text{V}$, $I_D = -2.8\text{A}$ $V_{GS} = -4.5\text{V}$ | | 7.2 | | nC |
| Gate Source Charge | Q_{gs} | | | 2.2 | | |
| Gate Drain Charge | Q_{gd} | | | 1.2 | | |
| Turn-On Delay Time | $t_{d(on)}$ | $V_{GS} = -4.5\text{V}$, $V_{DS} = -6\text{V}$, $R_L = 6\Omega$, $R_{GEN} = 6\Omega$ | | 50 | | ns |
| Turn-On Rise Time | t_r | | | 30 | | |
| Turn-Off Delay Time | $t_{d(off)}$ | | | 40 | | |
| Turn-Off Fall Time | t_f | | | 11 | | |
| Diode Forward Voltage | V_{SD} | $I_S = -1\text{A}$, $V_{GS} = 0\text{V}$ | | | -1.2 | V |

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

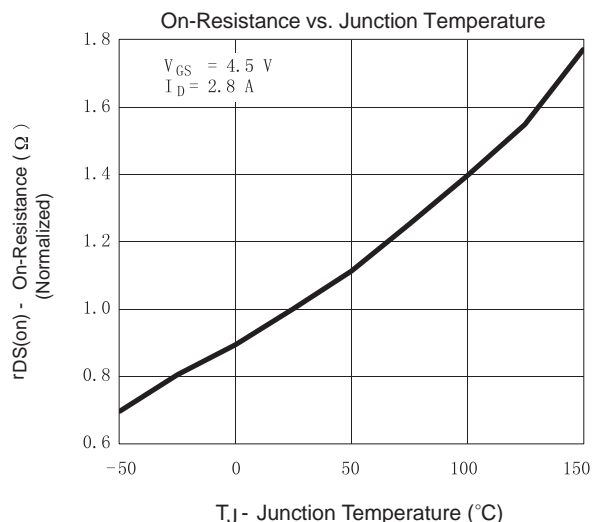
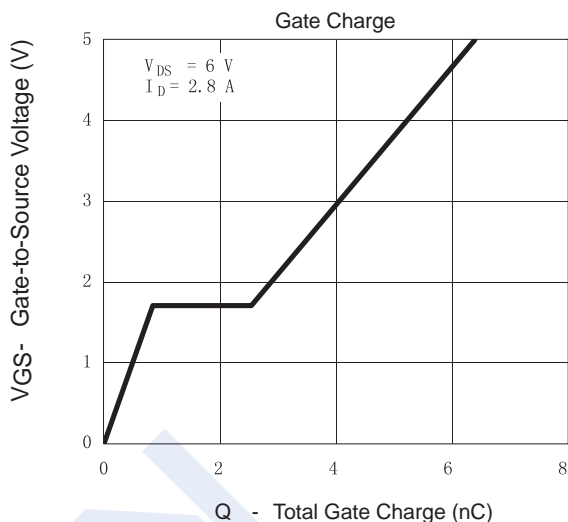
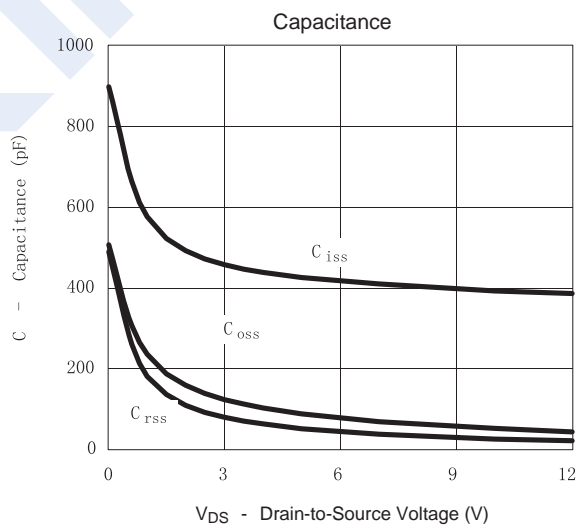
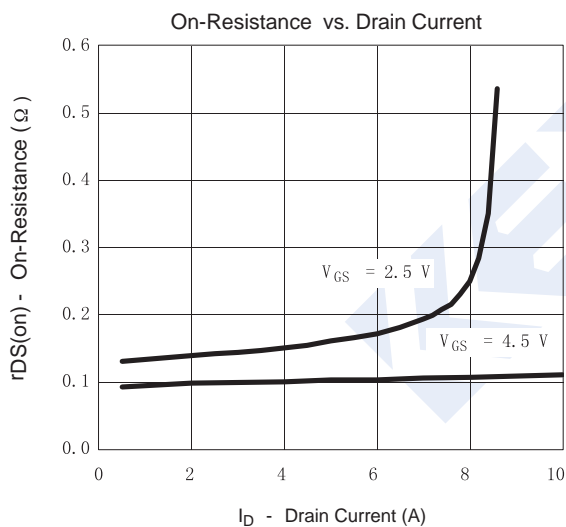
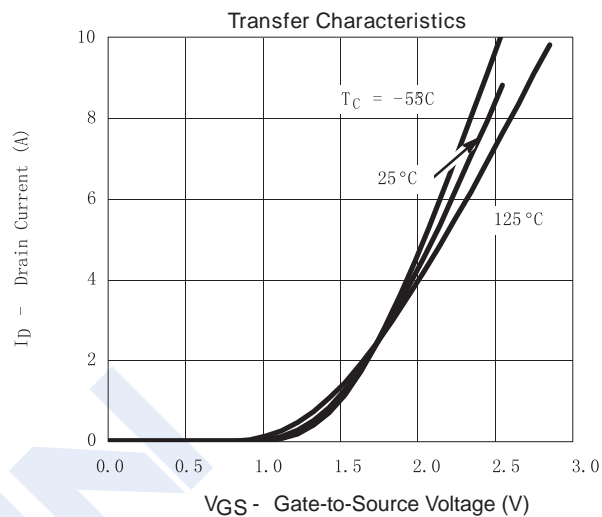
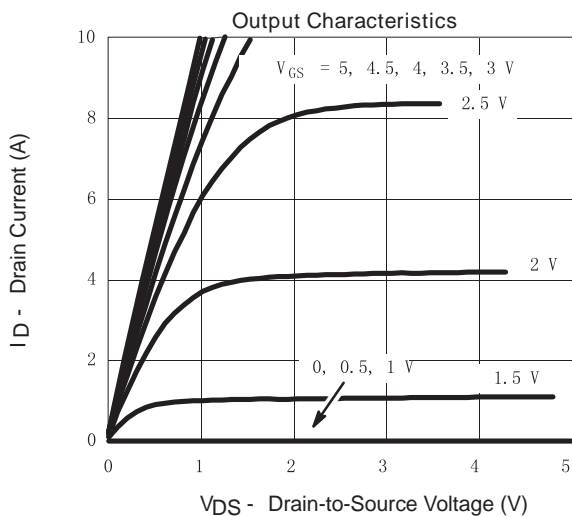
■ Marking

| | |
|---------|-----|
| Marking | JCA |
|---------|-----|

P-channel MOSFET

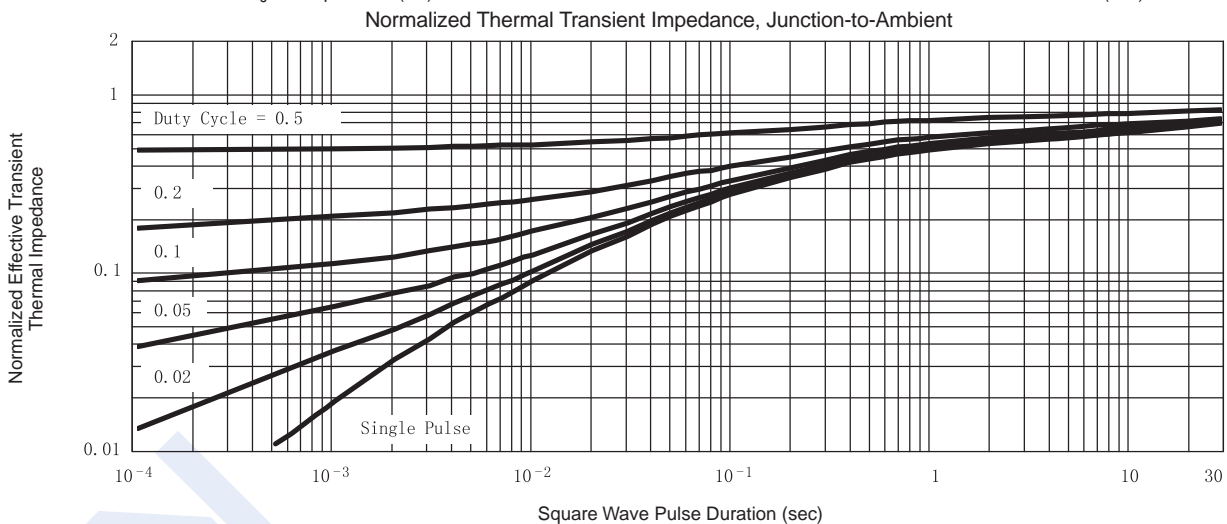
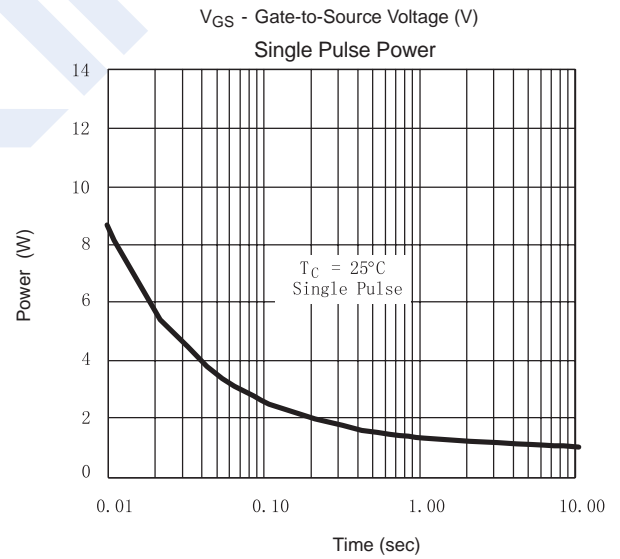
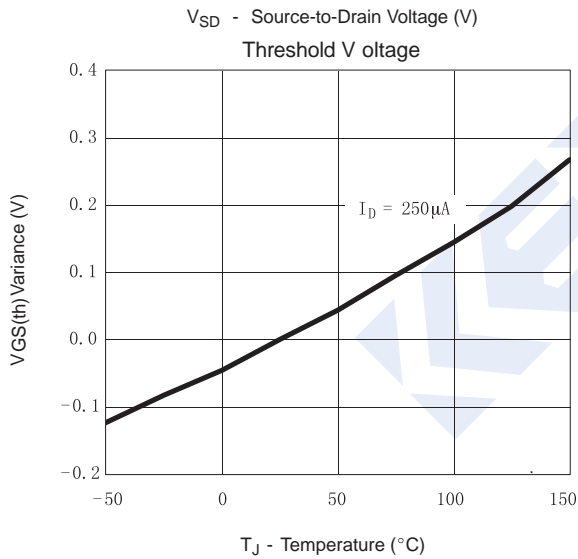
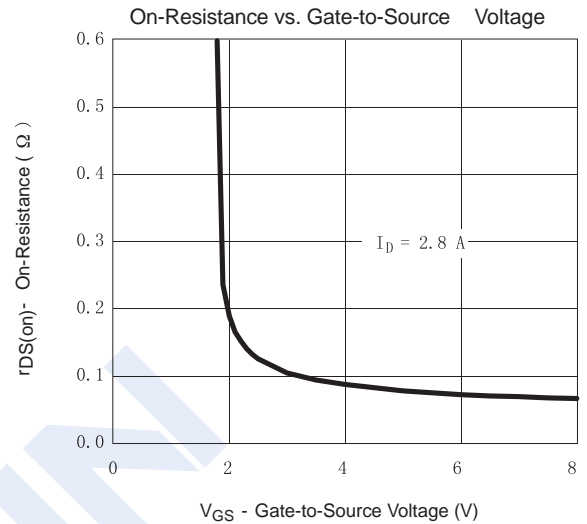
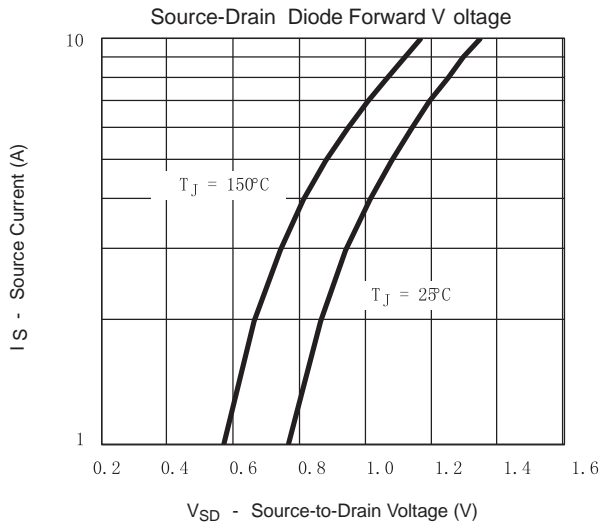
2KJ6053DFN

■ Typical Characteristics



P-channel MOSFET

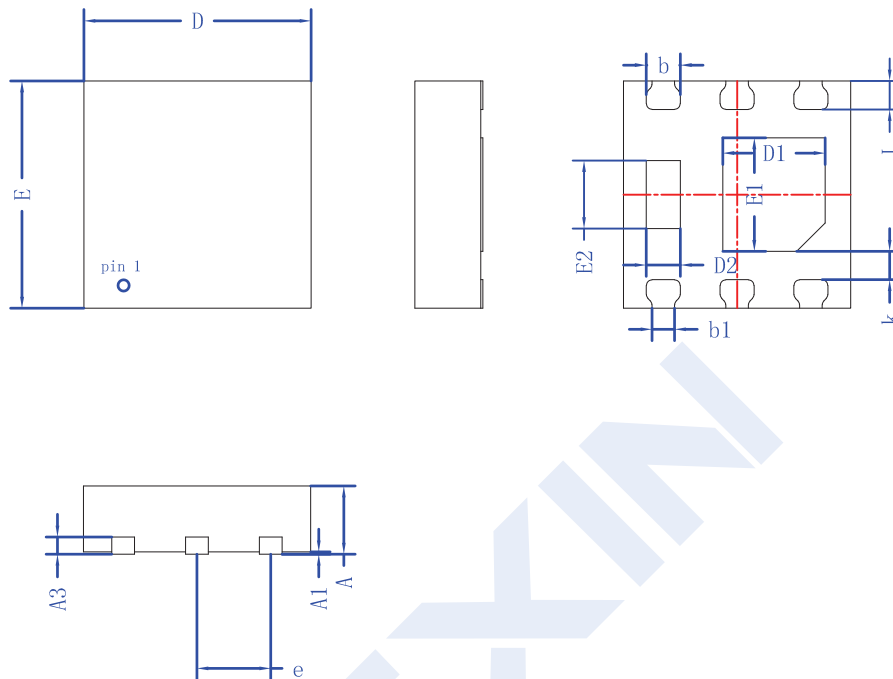
2KJ6053DFN



P-channel MOSFET

2KJ6053DFN

■ DFN2X2-6 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | | Dimensions In Inches | | |
|--------|---------------------------|------|------|----------------------|-------|-------|
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 0.50 | 0.55 | 0.65 | 0.022 | 0.024 | 0.026 |
| A1 | 0.00 | 0.02 | 0.05 | 0.000 | 0.001 | 0.002 |
| A3 | 0.152 REF. | | | 0.006REF. | | |
| D | 1.90 | 2.00 | 2.10 | 0.075 | 0.079 | 0.083 |
| D1 | 0.80 | 0.90 | 1.00 | 0.031 | 0.035 | 0.039 |
| D2 | 0.20 | 0.30 | 0.40 | 0.008 | 0.012 | 0.016 |
| E | 1.90 | 2.00 | 2.10 | 0.075 | 0.079 | 0.083 |
| E1 | 0.90 | 1.00 | 1.10 | 0.035 | 0.039 | 0.043 |
| E2 | 0.50 | 0.60 | 0.70 | 0.020 | 0.024 | 0.028 |
| b | 0.25 | 0.30 | 0.35 | 0.010 | 0.012 | 0.014 |
| b1 | 0.15 | 0.20 | 0.25 | 0.006 | 0.008 | 0.010 |
| e | 0.65TYP. | | | 0.026TYP. | | |
| k | 0.20MIN. | | | 0.006MIN. | | |
| L | 0.20 | 0.25 | 0.30 | 0.008 | 0.010 | 0.012 |