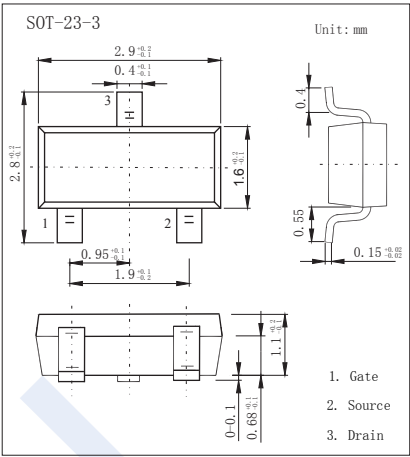
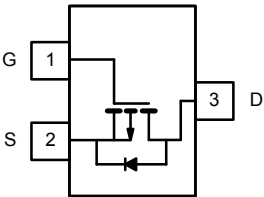


P-Channel Enhancement MOSFET SI2307DS (KI2307DS)

■ Features

- $V_{DS} (V) = -30V$
- $I_D = -3.0A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 80m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 140m\Omega$ ($V_{GS} = -4.5V$)



■ Absolute Maximum Ratings $T_a = 25^{\circ}C$

| Parameter | Symbol | 5 sec | Unit |
|--|------------|------------|---------------|
| Drain-Source Voltage | V_{DS} | -30 | V |
| Gate-Source Voltage | V_{GS} | ± 20 | |
| Continuous Drain Current $T_J = 150^{\circ}C$ (Note.1,2) | I_D | -3 | A |
| | | -2.5 | |
| Pulsed Drain Current | I_{DM} | -12 | W |
| Power Dissipation (Note.1,2) | P_D | 1.25 | |
| | | 0.8 | |
| Thermal Resistance..Junction- to-Ambient | R_{thJA} | 100 | $^{\circ}C/W$ |
| Junction Temperature | T_J | 150 | $^{\circ}C$ |
| Junction and Storage Temperature Range | T_{stg} | -55 to 150 | |

Note.1: Surface mounted on FR4 board.

Note.2: $t \leq 5$ sec.

P-Channel Enhancement MOSFET

SI2307DS (K12307DS)

■ Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------------------|---------------------|---|------|-----|-------|------|
| Drain-Source Breakdown Voltage | V _{DSS} | I _D =-250μA, V _{GS} =0V | -30 | | | V |
| Zero Gate Voltage Drain Current | I _{DSS} | V _D =-24V, V _{GS} =0V | | | -1 | μA |
| | | V _D =-24V, V _{GS} =0V, T _J =55℃ | | | -10 | |
| Gate-Body leakage current | I _{GSS} | V _D =0V, V _{GS} =±20V | | | ±100 | nA |
| Gate Threshold Voltage | V _{GS(th)} | V _D =V _{GS} I _D =-250μA | -1.0 | | -3.0 | V |
| Static Drain-Source On-Resistance *1 | R _{DS(on)} | V _{GS} =-10V, I _D =-3A | | 64 | 80 | mΩ |
| | | V _{GS} =-4.5V, I _D =-2.5A | | 103 | 140 | |
| On state drain current *1 | I _{D(ON)} | V _{GS} =-10V, V _D =-5V | -6 | | | A |
| Forward Transconductance *1 | g _{FS} | V _D =-10V, I _D =-3A | | 4.5 | | S |
| Input Capacitance | C _{iss} | V _{GS} =0V, V _D =-15V, f=1MHz | | 565 | | pF |
| Output Capacitance | C _{oss} | | | 126 | | |
| Reverse Transfer Capacitance | C _{rss} | | | 75 | | |
| Total Gate Charge | Q _g | V _{GS} =-15V, V _D =-15V, I _D =-3A | | 10 | 15 | nC |
| Gate Source Charge | Q _{gs} | | | 1.9 | | |
| Gate Drain Charge | Q _{gd} | | | 2 | | |
| Turn-On DelayTime | t _{d(on)} | V _{GS} =-10V, V _D =-15V, R _L =15Ω, R _{GEN} =6Ω I _D =-1.0A | | 10 | 20 | ns |
| Turn-On Rise Time | t _r | | | 9 | 20 | |
| Turn-Off DelayTime | t _{d(off)} | | | 27 | 50 | |
| Turn-Off Fall Time | t _f | | | 7 | 16 | |
| Maximum Body-Diode Continuous Current | I _S | | | | -1.25 | A |
| Diode Forward Voltage | V _{SD} | I _S =-1.25A, V _{GS} =0 | | | -1.2 | V |

*1Pulse test: PW ≤ 300us duty cycle ≤ 2%.

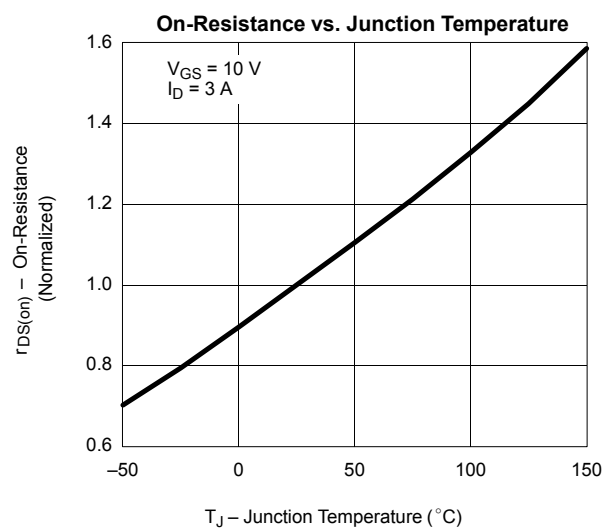
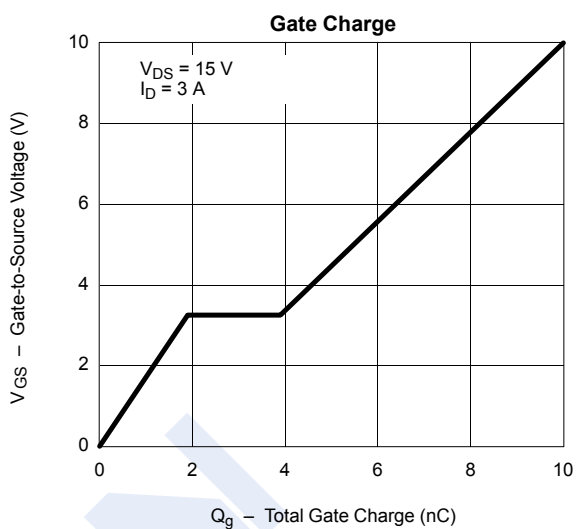
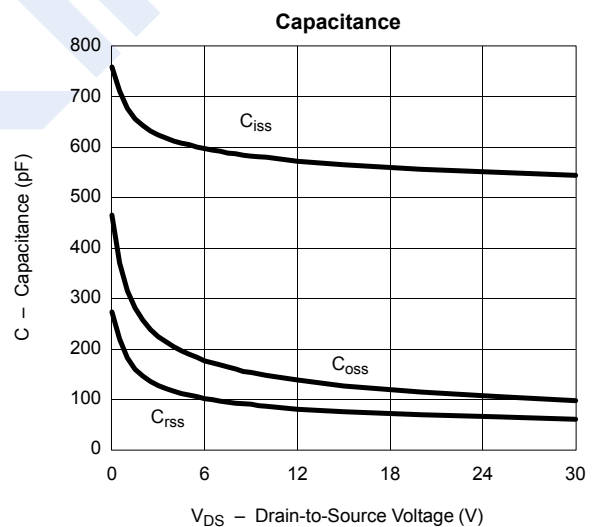
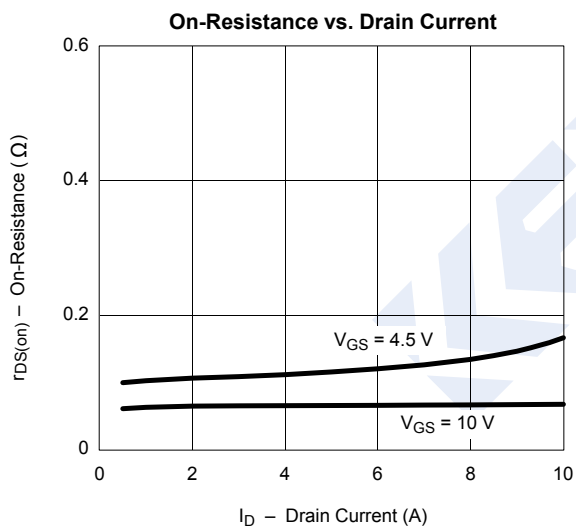
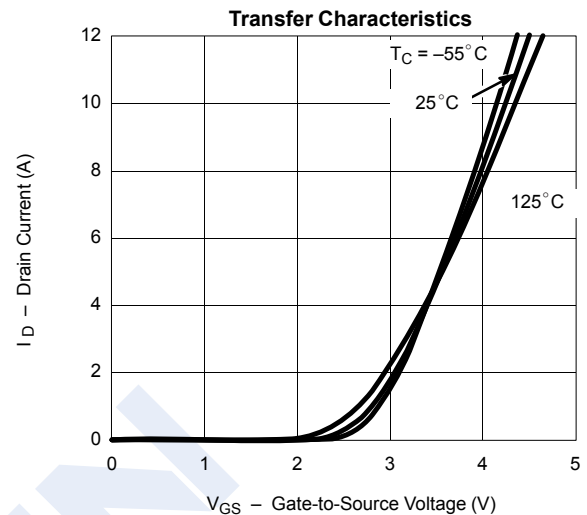
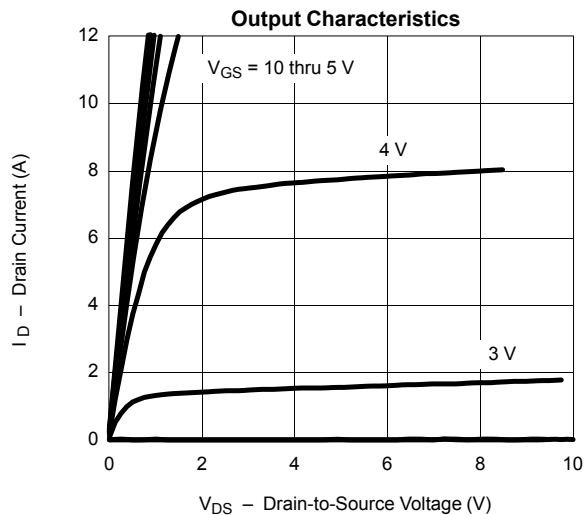
■ Marking

| | |
|---------|-----|
| Marking | A7* |
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P-Channel Enhancement MOSFET

SI2307DS (KI2307DS)

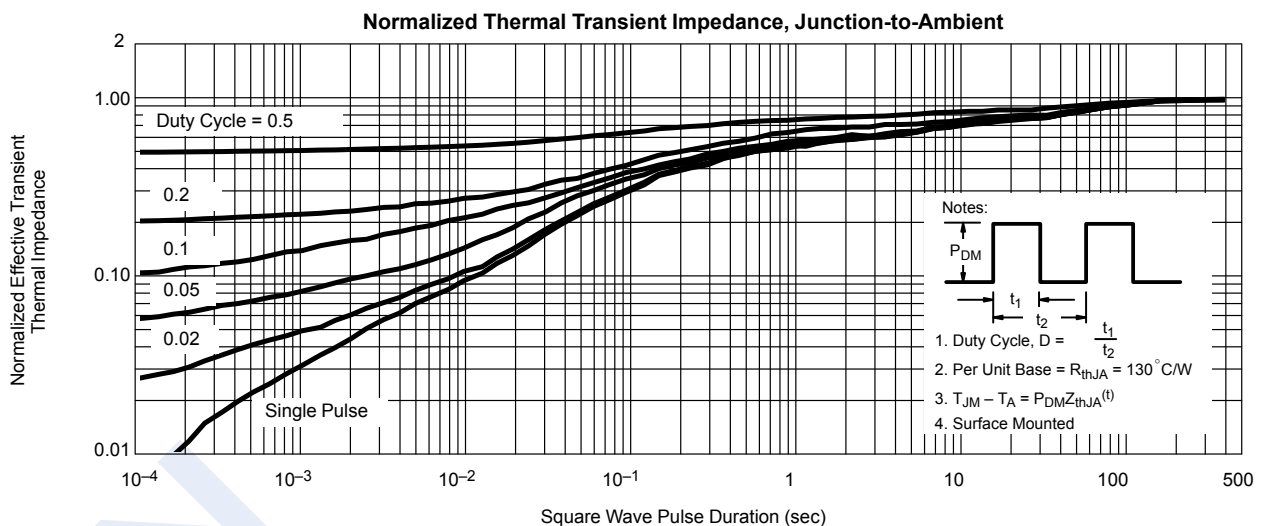
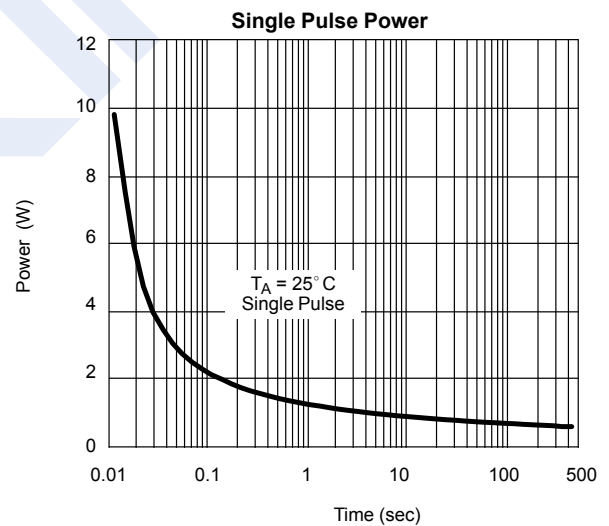
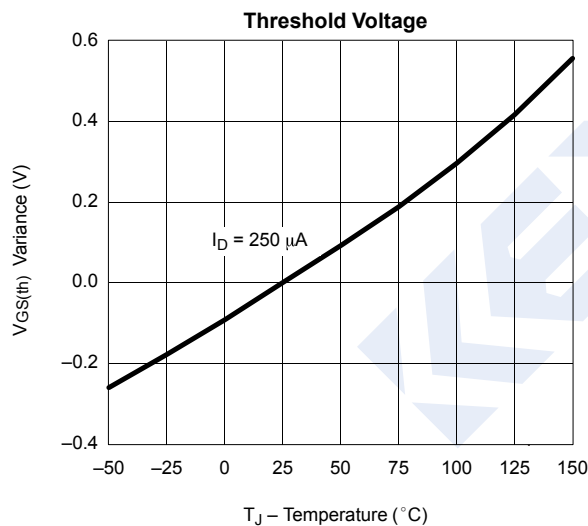
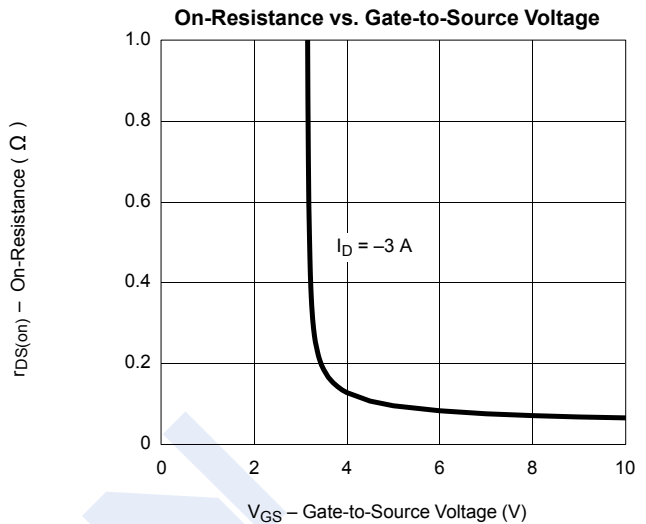
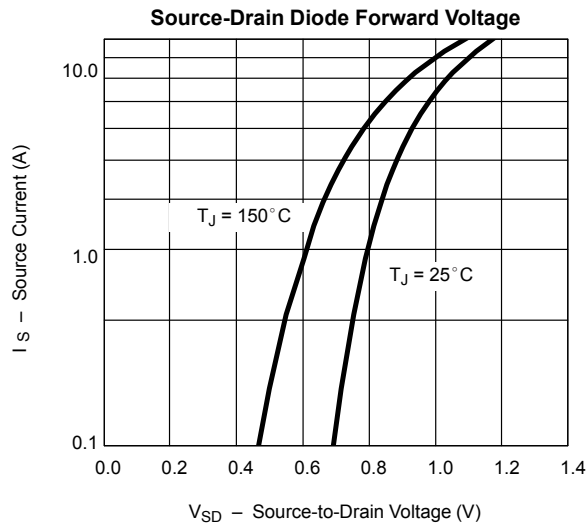
■ Typical Characteristics



P-Channel Enhancement MOSFET

SI2307DS (KI2307DS)

■ Typical Characteristics



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