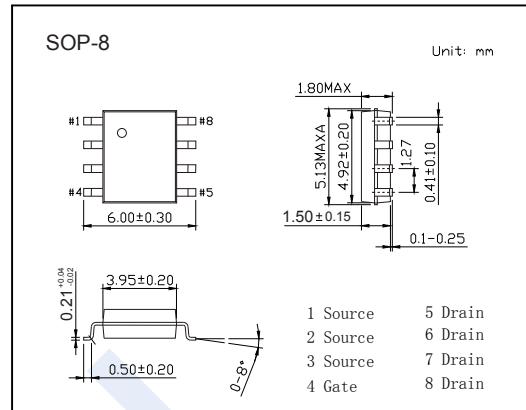
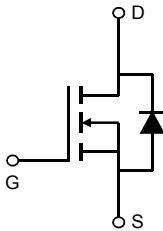


N-Channel MOSFET

AO4260 (KO4260)

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 18 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 5.2m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 6.3m\Omega (V_{GS} = 4.5V)$



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

| Parameter | Symbol | Rating | Unit | |
|---|------------|------------------|------------|--------------|
| Drain-Source Voltage | V_{DS} | 60 | V | |
| Gate-Source Voltage | V_{GS} | ± 20 | | |
| Continuous Drain Current | I_D | $T_A=25^\circ C$ | 18 | A |
| | | $T_A=70^\circ C$ | | |
| Pulsed Drain Current | I_{DM} | 130 | | |
| Avalanche Current | I_{AS} | 65 | | |
| Avalanche energy | $L=0.1mH$ | EAS | 211 | mJ |
| Power Dissipation | P_D | $T_A=25^\circ C$ | 3.1 | W |
| | | $T_A=70^\circ C$ | 2 | |
| Thermal Resistance.Junction- to-Ambient | R_{thJA} | $t \leq 10s$ | 40 | $^\circ C/W$ |
| | | Steady-State | 75 | |
| Thermal Resistance.Junction- to-Lead | R_{thJL} | 24 | | |
| Junction Temperature | T_J | 150 | $^\circ C$ | |
| Storage Temperature Range | T_{stg} | -55 to 150 | | |

N-Channel MOSFET

AO4260 (KO4260)

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit | |
|---------------------------------------|---------------------|---|--------------------------------------|------|------|------|--|
| Drain-Source Breakdown Voltage | V _{DSS} | I _D =250 uA, V _{GS} =0V | 60 | | | V | |
| Zero Gate Voltage Drain Current | I _{DSS} | V _{Ds} =60V, V _{GS} =0V | | | 1 | uA | |
| | | V _{Ds} =60V, V _{GS} =0V, T _J =55°C | | | 5 | | |
| Gate-Body Leakage Current | I _{GSS} | V _{Ds} =0V, V _{GS} =±20V | | | ±100 | nA | |
| Gate Threshold Voltage | V _{GS(th)} | V _{Ds} =V _{GS} , I _D =250uA | 1.3 | | 2.4 | V | |
| Static Drain-Source On-Resistance | R _{Ds(on)} | V _{GS} =10V, I _D =18A | | | 5.2 | m Ω | |
| | | V _{GS} =10V, I _D =18A T _J =125°C | | | 8.4 | | |
| | | V _{GS} =4.5V, I _D =16A | | | 6.3 | | |
| On State Drain Current | I _{D(ON)} | V _{GS} =10V, V _{Ds} =5V | 130 | | | A | |
| Forward Transconductance | g _{FS} | V _{Ds} =5V, I _D =18A | | 70 | | S | |
| Input Capacitance | C _{iss} | V _{GS} =0V, V _{Ds} =30V, f=1MHz | | 4940 | | pF | |
| Output Capacitance | C _{oss} | | | 445 | | | |
| Reverse Transfer Capacitance | C _{rss} | | | 32 | | | |
| Gate Resistance | R _g | V _{GS} =0V, V _{Ds} =0V, f=1MHz | 0.4 | | 1.4 | Ω | |
| Total Gate Charge (10V) | Q _g | V _{GS} =10V, V _{Ds} =30V, I _D =18A | | 71 | 100 | nC | |
| Total Gate Charge (4.5V) | | | | 31 | 45 | | |
| Gate Source Charge | | | Q _{gs} | | 12.5 | | |
| Gate Drain Charge | | | Q _{gd} | | 8.5 | | |
| Turn-On DelayTime | | | t _{d(on)} | | 8.5 | | |
| Turn-On Rise Time | t _r | V _{GS} =10V, V _{Ds} =30V, R _L =1.67Ω, R _{GEN} =3Ω | | 8.5 | | | |
| Turn-Off DelayTime | t _{d(off)} | | | 50 | | | |
| Turn-Off Fall Time | t _f | | | 15.5 | | | |
| Body Diode Reverse Recovery Time | t _{rr} | | | 22 | | | |
| Body Diode Reverse Recovery Charge | Q _{rr} | | I _F = 18A, di/dt= 500A/us | | 96 | nC | |
| Maximum Body-Diode Continuous Current | I _S | | | | 4.5 | A | |
| Diode Forward Voltage | V _{SD} | I _S =1A, V _{GS} =0V | | | 1 | V | |

Note : The static characteristics in Figures 1 to 6 are obtained using <300 μs pulses, duty cycle 0.5% max.

■ Marking

| | |
|---------|----------------|
| Marking | 4260 KC**** |
|---------|----------------|

N-Channel MOSFET AO4260 (KO4260)

■ Typical Characteristics

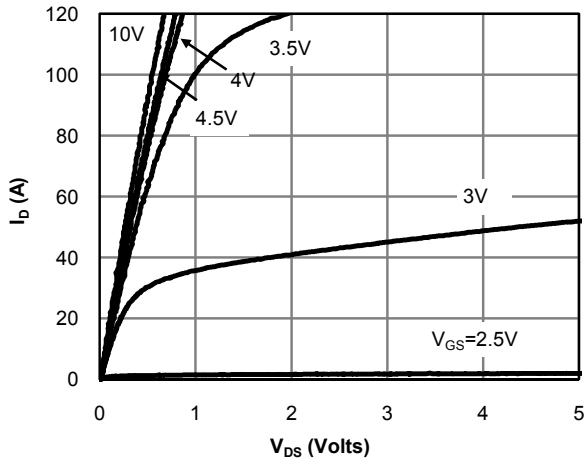


Figure 1: On-Region Characteristics (Note E)

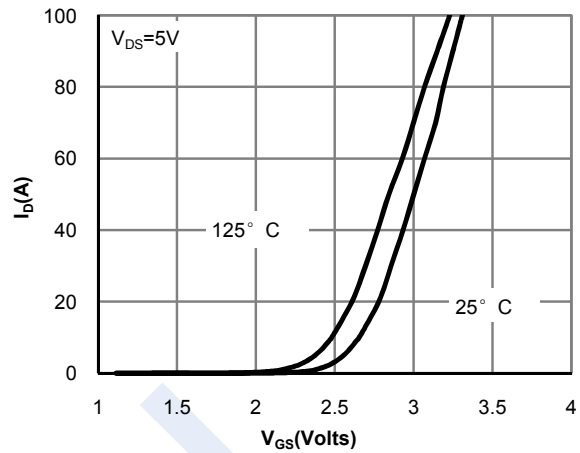


Figure 2: Transfer Characteristics (Note E)

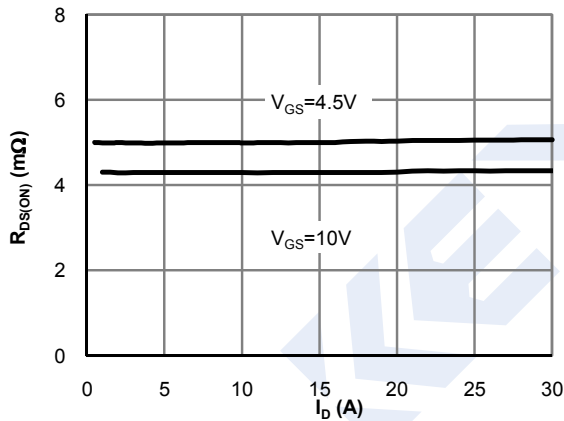


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

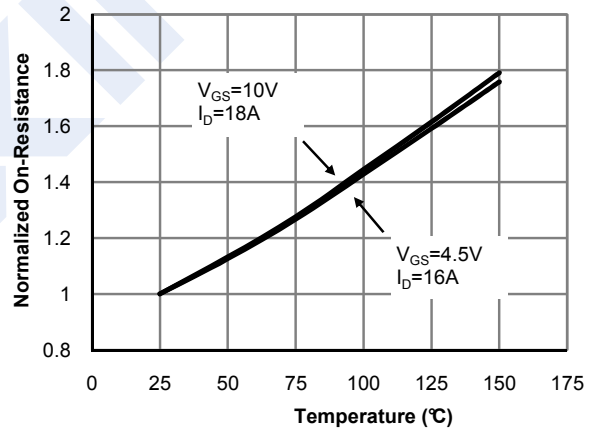


Figure 4: On-Resistance vs. Junction Temperature (Note E)

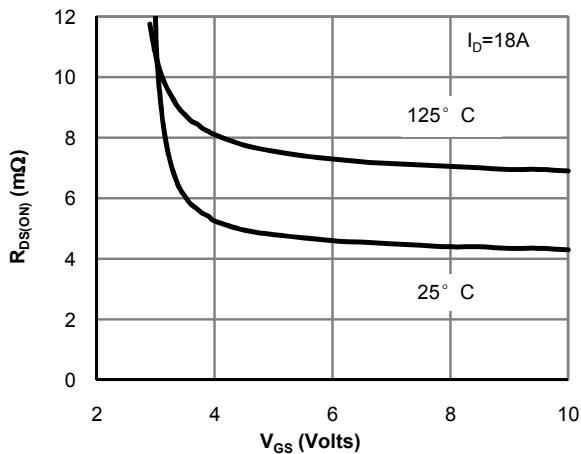


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

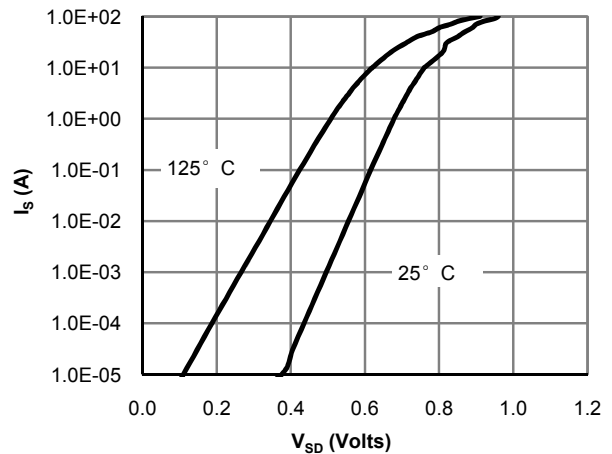


Figure 6: Body-Diode Characteristics (Note E)

N-Channel MOSFET AO4260 (KO4260)

■ Typical Characteristics

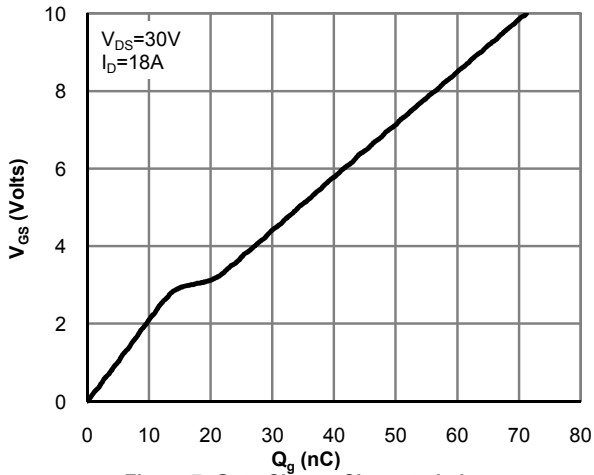


Figure 7: Gate-Charge Characteristics

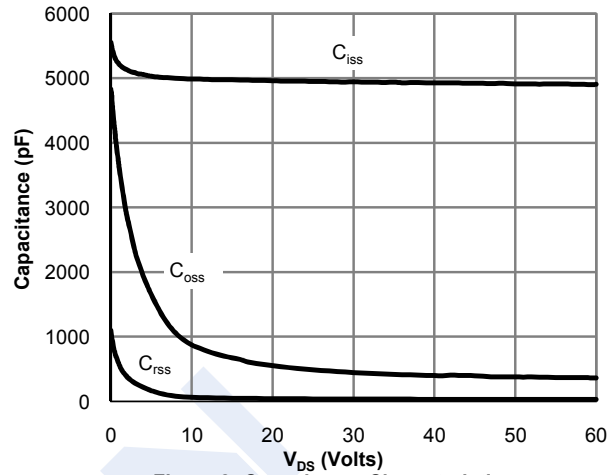


Figure 8: Capacitance Characteristics

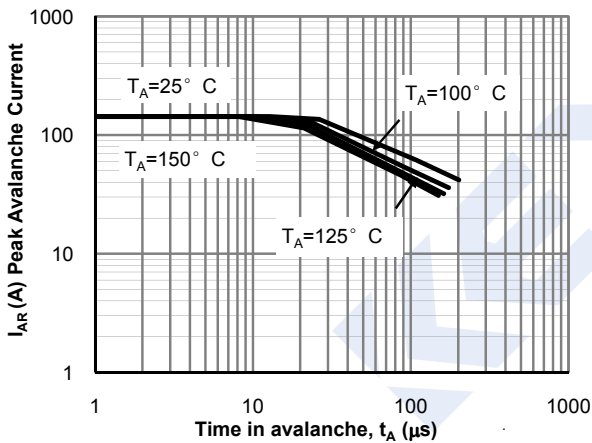


Figure 12: Single Pulse Avalanche capability (Note C)

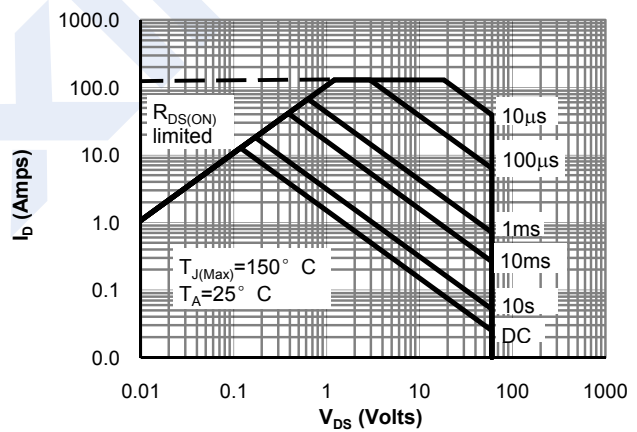


Figure 10: Maximum Forward Biased Safe Operating Area (Note F)

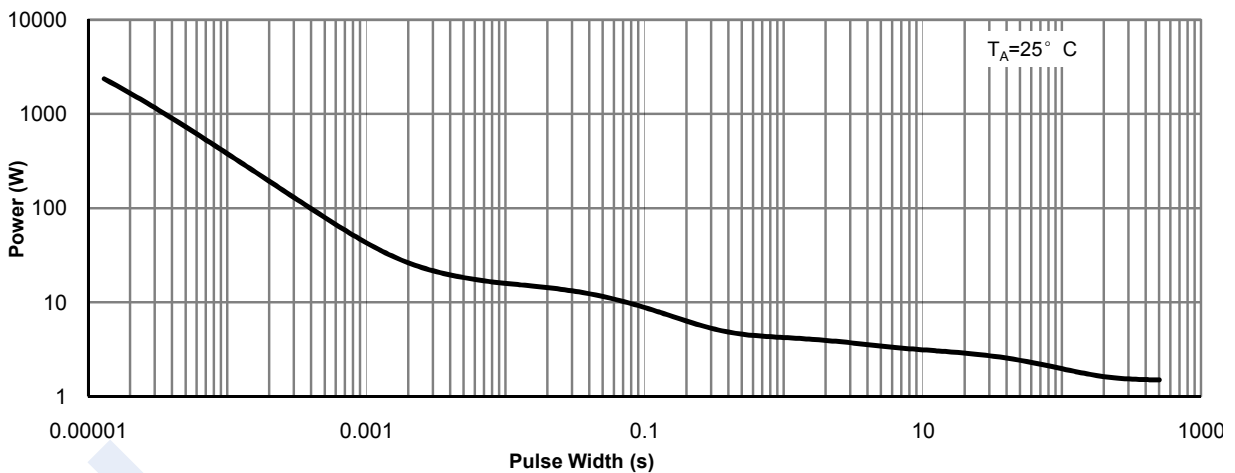


Figure 11: Single Pulse Power Rating Junction-to-Ambient (Note F)

N-Channel MOSFET AO4260 (KO4260)

■ Typical Characteristics

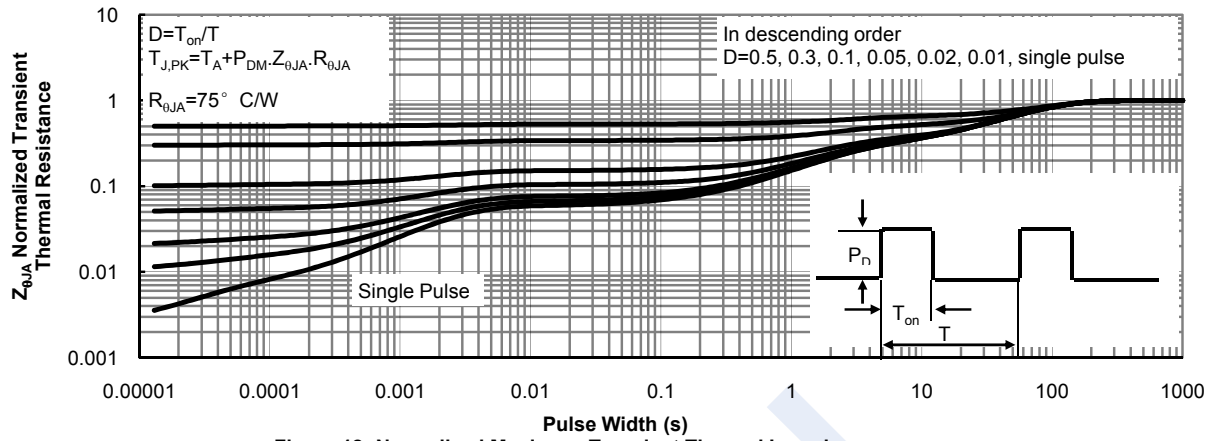


Figure 12: Normalized Maximum Transient Thermal Impedance s