

SOT-323 Plastic-Encapsulate MOSFETS

N-Channel 20-V(D-S) MOSFET

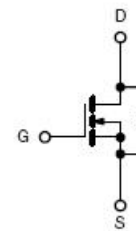
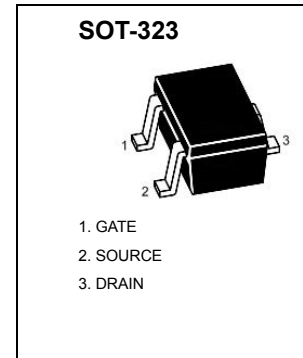
FEATURE

- TrenchFET Power MOSFET

APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter

MARKING: A2S



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

| Parameter | Symbol | Value | Unit |
|---|-----------------|------------|---------------------------|
| Drain-Source Voltage | V_{DS} | 20 | V |
| Gate-Source Voltage | V_{GS} | ± 8 | |
| Continuous Drain Current | I_D | 3.0 | A |
| Continuous Source-Drain Current(Diode Conduction) | I_S | 0.6 | |
| Power Dissipation | P_D | 0.35 | W |
| Thermal Resistance from Junction to Ambient ($t \leq 5s$) | $R_{\theta JA}$ | 357 | $^\circ\text{C}/\text{W}$ |
| Operating Junction | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 ~ +150 | |

Electrical characteristics (T_a=25°C unless otherwise noted)

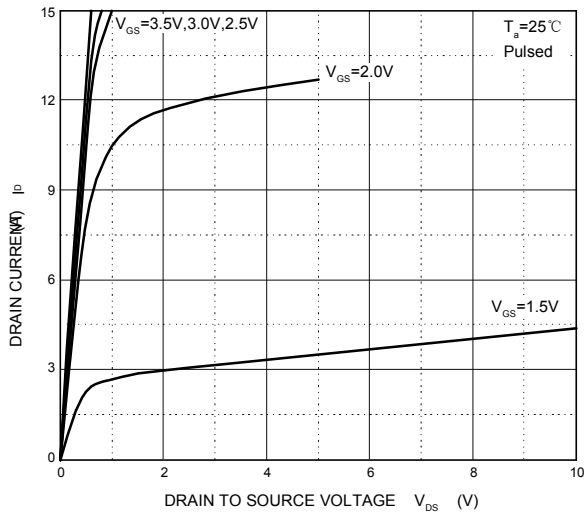
| Parameter | Symbol | Test Condition | Min | Typ | Max | Units |
|---|----------------------|---|------|-------|-------|-------|
| Static | | | | | | |
| Drain-source breakdown voltage | V _{(BR)DSS} | V _{GS} = 0V, I _D = 10μA | 20 | | | V |
| Gate-threshold voltage | V _{GS(th)} | V _{DS} = V _{GS} , I _D = 50μA | 0.65 | 0.95 | 1.2 | |
| Gate-body leakage | I _{GSS} | V _{DS} = 0V, V _{GS} = ±8V | | | ±100 | nA |
| Zero gate voltage drain current | I _{DSS} | V _{DS} = 20V, V _{GS} = 0V | | | 1 | μA |
| Drain-source on-resistance ^a | r _{DS(on)} | V _{GS} = 4.5V, I _D = 3.0A | | 0.045 | 0.060 | Ω |
| | | V _{GS} = 2.5V, I _D = 2.0A | | 0.070 | 0.115 | |
| Forward transconductance ^a | g _{fs} | V _{DS} = 5V, I _D = 3.6A | | 8 | | S |
| Diode forward voltage | V _{SD} | I _S = 0.94A, V _{GS} = 0V | | 0.76 | 1.2 | V |
| Dynamic | | | | | | |
| Total gate charge | Q _g | V _{DS} = 10V, V _{GS} = 4.5V, I _D = 3.6A | | 4.0 | 10 | nC |
| Gate-source charge | Q _{gs} | | | 0.65 | | |
| Gate-drain charge | Q _{gd} | | | 1.5 | | |
| Input capacitance ^b | C _{iss} | V _{DS} = 10V, V _{GS} = 0V, f = 1MHz | | 300 | | pF |
| Output capacitance ^b | C _{oss} | | | 120 | | |
| Reverse transfer capacitance ^b | C _{rss} | | | 80 | | |
| Switching^b | | | | | | |
| Turn-on delay time | t _{d(on)} | V _{DD} = 10V, R _L = 5.5Ω, I _D ≈ 3.6A, V _{GEN} = 4.5V, R _g = 6Ω | | 7 | 15 | ns |
| Rise time | t _r | | | 55 | 80 | |
| Turn-off delay time | t _{d(off)} | | | 16 | 60 | |
| Fall time | t _f | | | 10 | 25 | |

Notes :

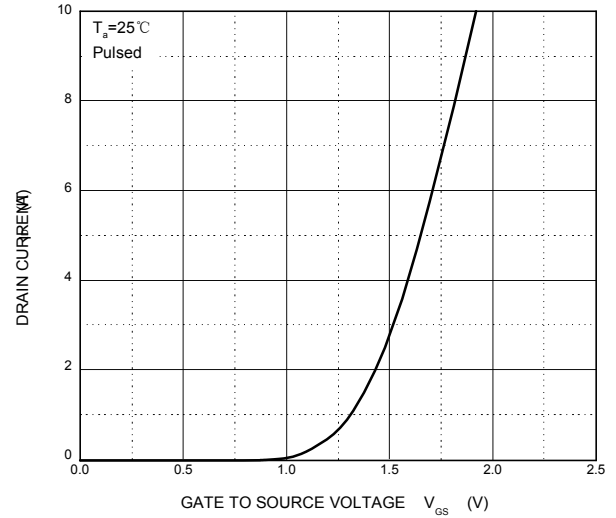
- Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 2%.
- These parameters have no way to verify.

Typical Characteristics

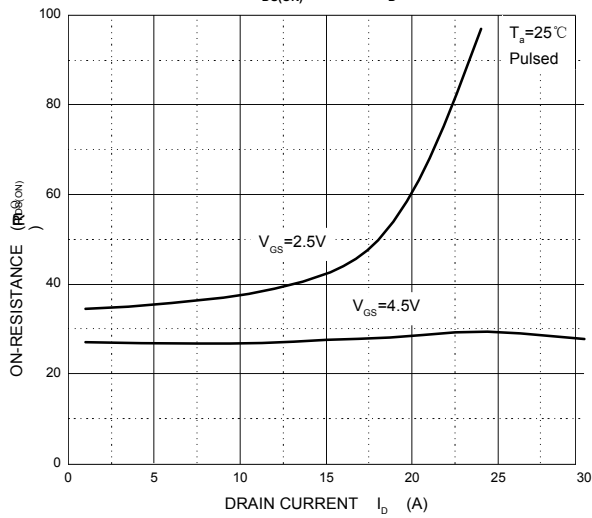
Output Characteristics



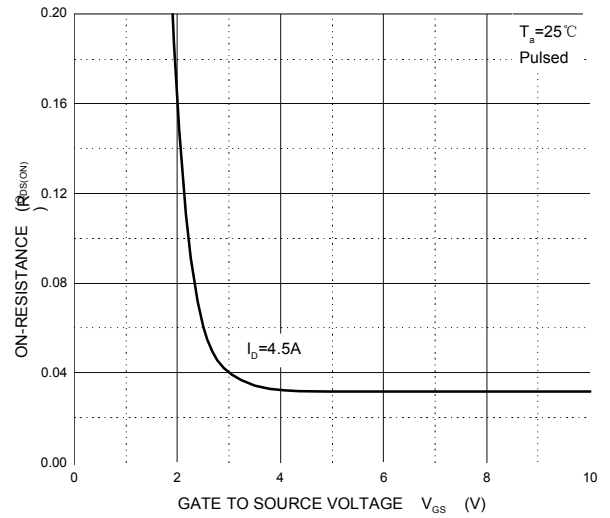
Transfer Characteristics



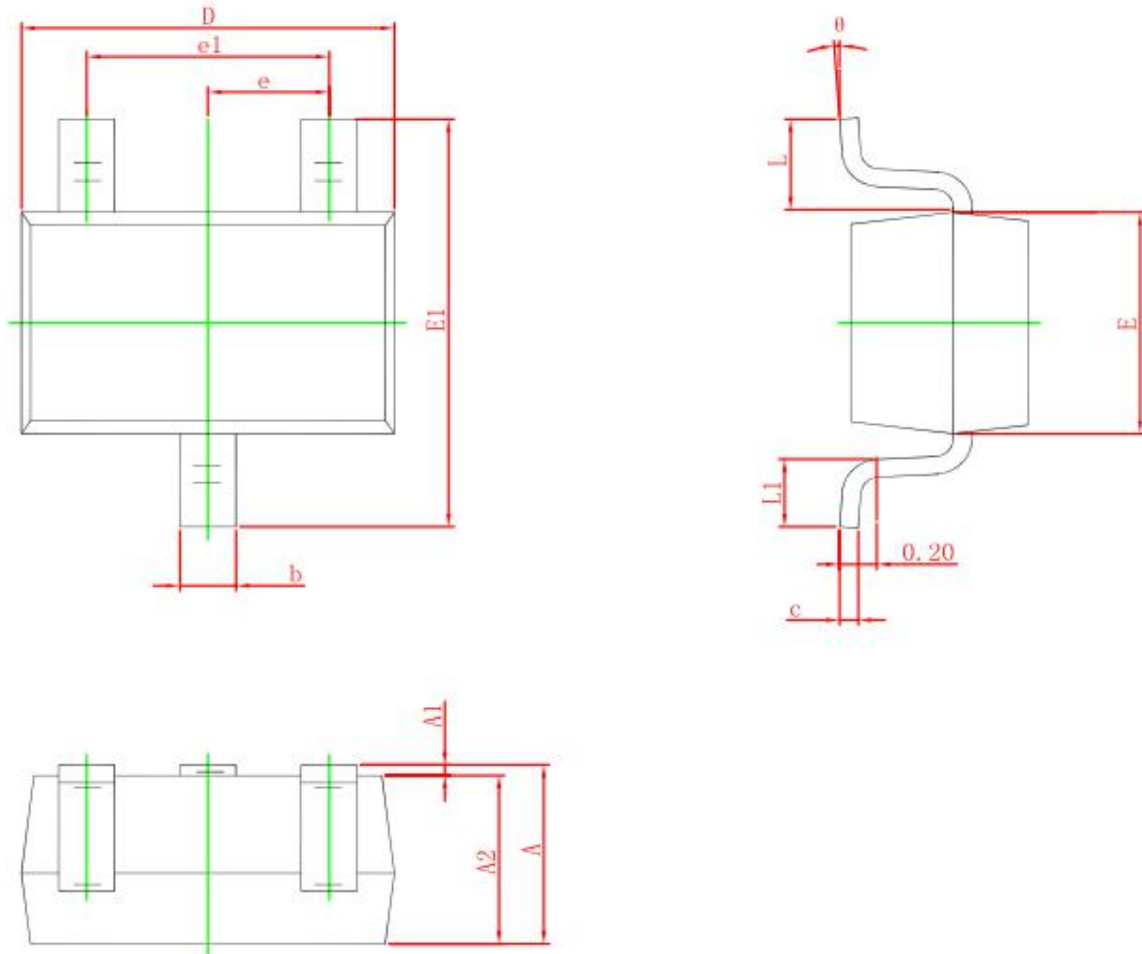
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



SOT-323 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 | 0.200 | 0.400 | 0.008 | 0.016 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.450 | 0.085 | 0.096 |
| 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° |

单击下面可查看定价，库存，交付和生命周期等信息

[>>SHIKUES\(时科\)](#)