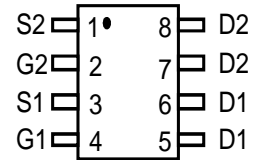
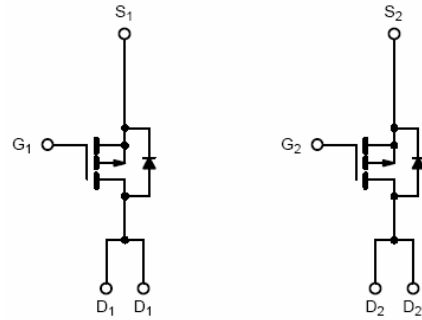


DESCRIPTION

STP4925 is the dual P-Channel logic enhancement mode power field effect transistor are produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application, notebook computer power management, and other battery powered circuits where high-side switching

FEATURES

- $V_{DS(V)} = -30V$
- $R_{DS(ON)} < 25m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 32m\Omega$ ($V_{GS} = 4.5V$)



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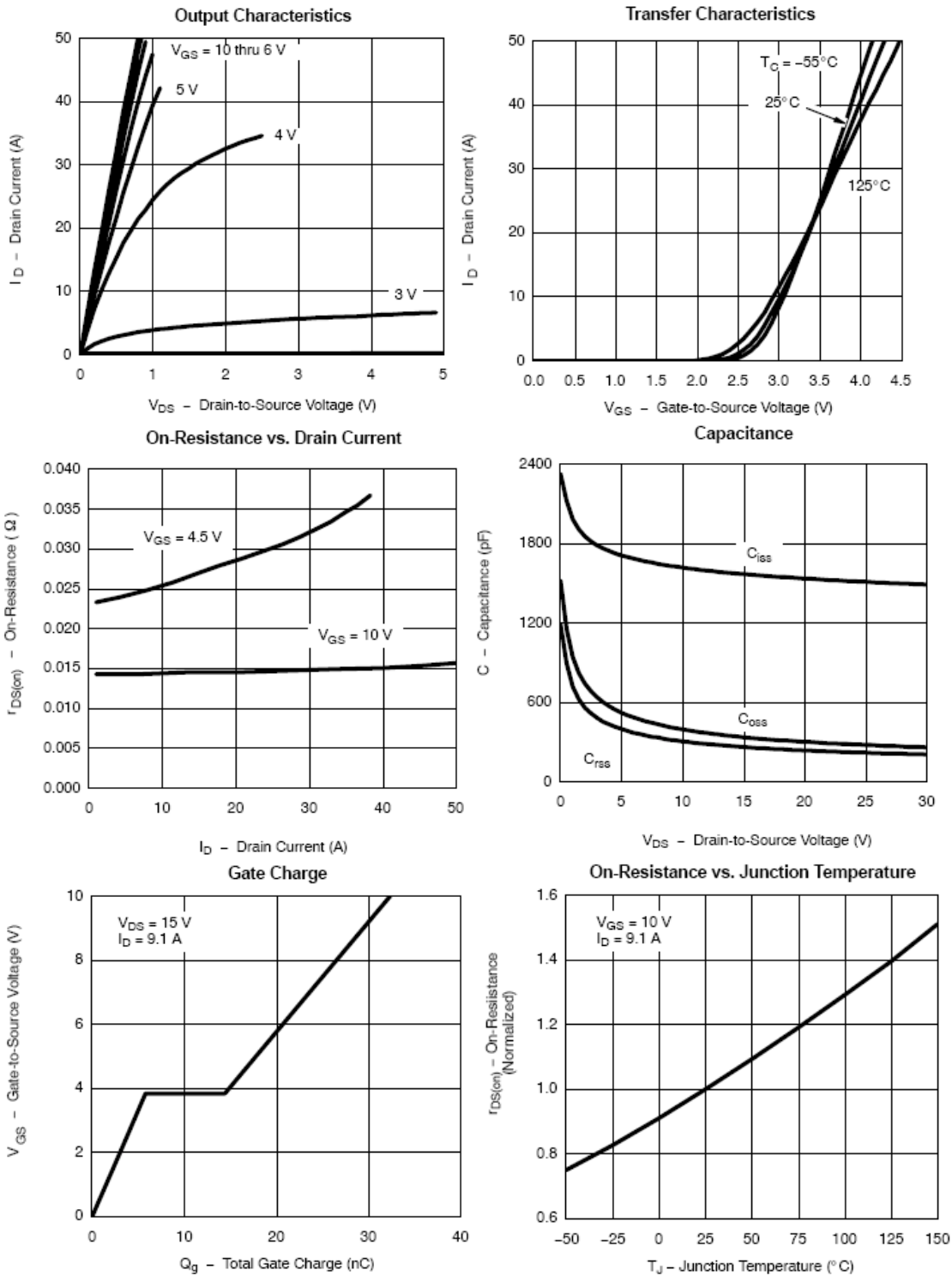
ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$ Unless otherwise noted)

| Parameter | Symbol | Typical | Unit |
|---|-----------------|----------------------------|--------------|
| Drain - Source Voltage | V_{DSS} | -30 | V |
| Gate - Source Voltage | V_{GSS} | ± 20 | V |
| Continuous Drain Current ($T_J = 150^\circ C$) | I_D | $T_A = 25^\circ C$ -7.2 | A |
| | | $T_A = 70^\circ C$ -5.6 | |
| Pulsed Drain Current | I_{DM} | -50 | A |
| Continuous Source Current (Diode Conduction) | I_S | -2.3 | A |
| Power Dissipation | P_D | $T_A = 25^\circ C$ 2.8 | W |
| | | $T_A = 70^\circ C$ 1.8 | |
| Operation Junction Temperature | T_J | -55/150 | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -55/150 | $^\circ C$ |
| Thermal Resistance - Junction to Ambient | $R_{\theta JA}$ | 70 | $^\circ C/W$ |

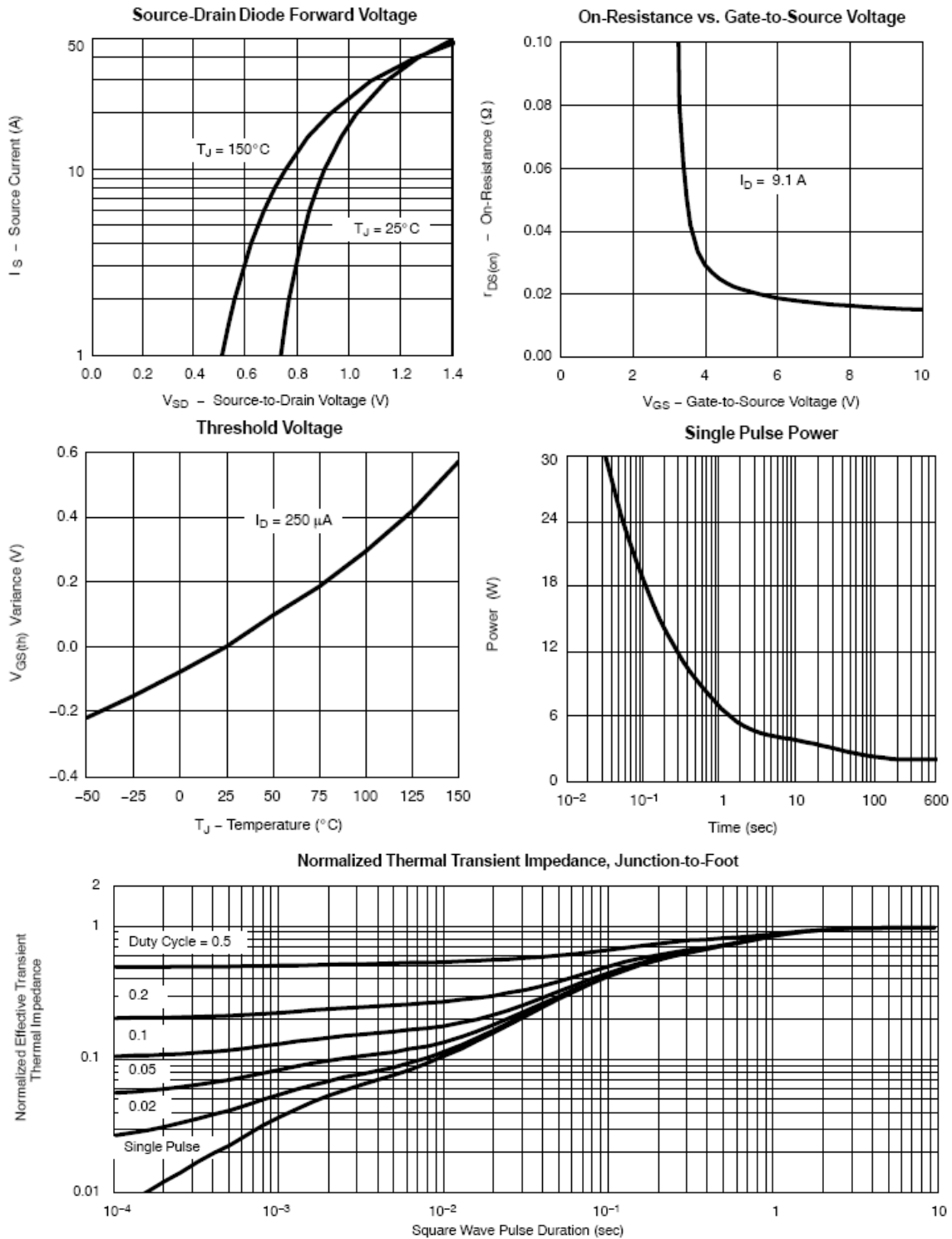
ELECTRICAL CHARACTERISTICS (Ta = 25°C Unless otherwise noted)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|----------------------------------|-------------------------|--|------|----------|-----------|------|
| Static | | | | | | |
| Drain - Source Breakdown Voltage | $V_{(BR)DSS}$ | $V_{GS}=0V, I_D = -250\mu A$ | -30 | | | V |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D = -250\mu A$ | -1.0 | | -3.0 | V |
| Gate Leakage Current | I_{GSS} | $V_{DS}=0V, V_{GS} = \pm 20V$ | | | ± 100 | nA |
| Zero Gate Voltage Drain Current | I_{DSS} $T_J = 55$ | $V_{DS} = -30V, V_{GS} = 0V$ | | | -1 | uA |
| | | $V_{DS} = -30V, V_{GS} = 0V$ | | | -5 | |
| Drain - source On - Resistance | $R_{DS(on)}$ | $V_{GS} = -10V, I_D = -7.2A$ $V_{GS} = -4.5V, I_D = -5.6A$ | | 21 29 | 25 32 | mΩ |
| Forward Tran Conductance | g_{fs} | $V_{DS} = -10V, I_D = -9.0A$ | | 24 | | S |
| Diode Forward Voltage | V_{SD} | $I_S = -2.3A, V_{GS} = 0V$ | | -0.8 | -1.0 | V |
| Dynamic | | | | | | |
| Total Gate Charge | Q_g | $V_{DS} = -15V, V_{GS} = -10V$ $I_D = -9.0A$ | | 16 | 24 | nC |
| Gate - Source Charge | Q_{gs} | | | 2.3 | | |
| Gate - Drain Charge | Q_{gd} | | | 4.5 | | |
| Input Capacitance | C_{iss} | $V_{DS} = -15V, V_{GS} = 0V$ $f = 1MHz$ | | 1650 | | pF |
| Output Capacitance | C_{oss} | | | 350 | | |
| Reverse Transfer Capacitance | C_{rss} | | | 235 | | |
| Turn - On Time | $t_{d(on)tr}$ | $V_{DD} = 15V, R_L = 15\Omega$ $I_D = -1.0A, V_{GEN} = -10V$ $R_G = 6\Omega$ | | 16 | 30 | nS |
| Turn - Off Time | $t_{d(off)tf}$ | | | 17 | 30 | |
| | | | | 65 | 110 | |
| | | | | 35 | 80 | |

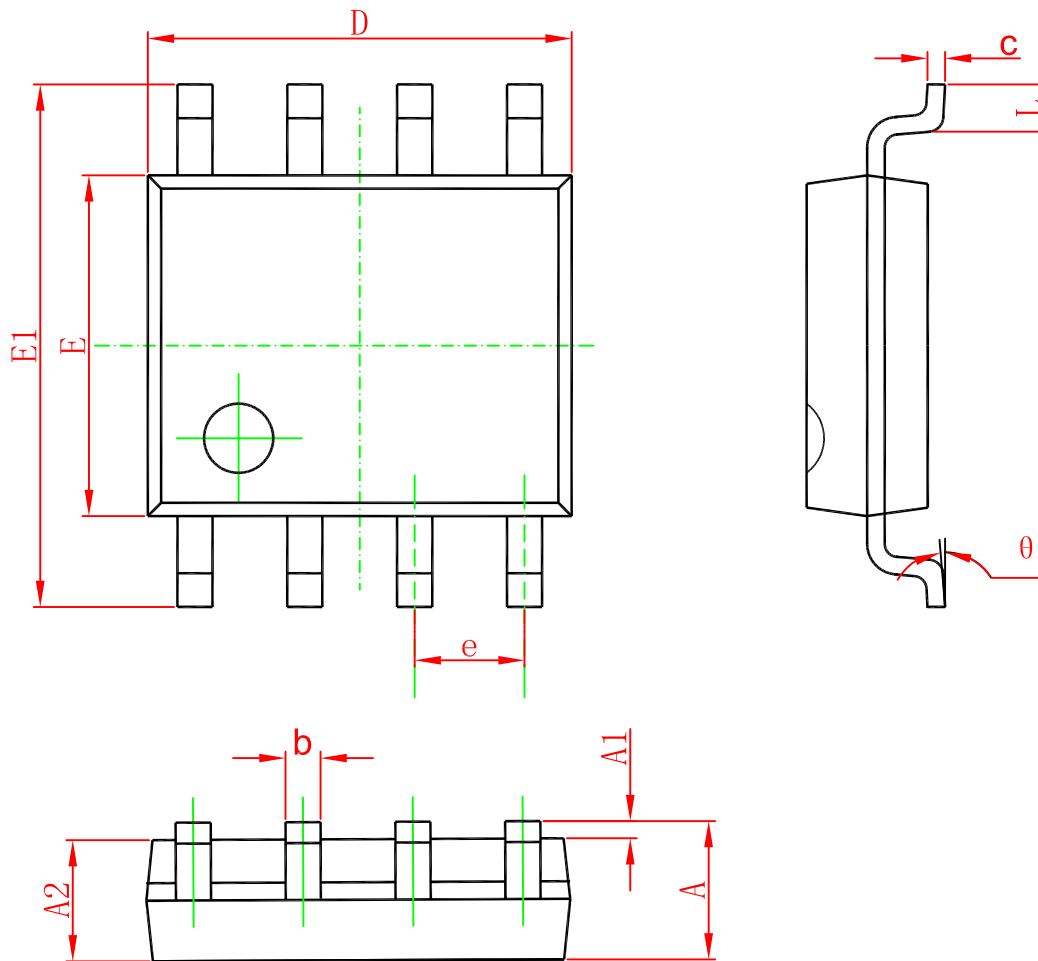
TYPICAL CHARACTERISTICS (25°C Unless Note)



TYPICAL CHARACTERISTICS (25°C Unless Note)

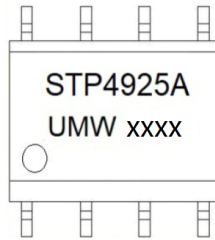


SOP-8



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.350 | 1.750 | 0.053 | 0.069 |
| A1 | 0.100 | 0.250 | 0.004 | 0.010 |
| A2 | 1.350 | 1.550 | 0.053 | 0.061 |
| b | 0.330 | 0.510 | 0.013 | 0.020 |
| c | 0.170 | 0.250 | 0.006 | 0.010 |
| D | 4.700 | 5.100 | 0.185 | 0.200 |
| E | 3.800 | 4.000 | 0.150 | 0.157 |
| E1 | 5.800 | 6.200 | 0.228 | 0.244 |
| e | 1.270(BSC) | | 0.050(BSC) | |
| L | 0.400 | 1.270 | 0.016 | 0.050 |
| θ | 0° | 8° | 0° | 8° |

Marking



| Order code | Package | Baseqty | Deliverymode |
|--------------|---------|---------|---------------|
| UMW STP4925A | SOP-8 | 3000 | Tape and reel |