

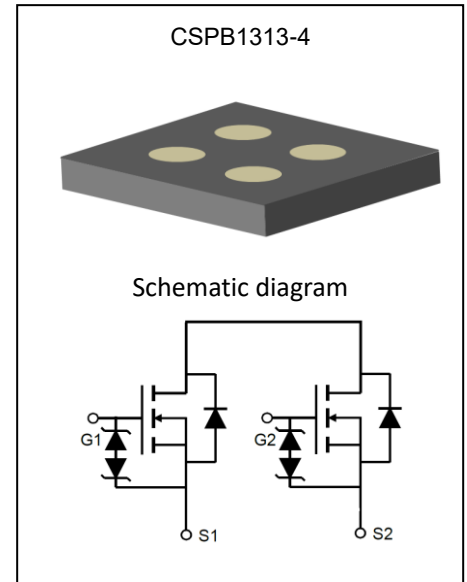
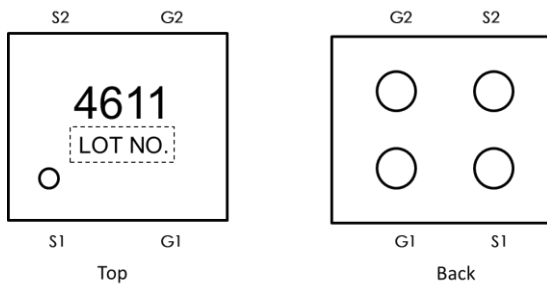
Product Summary

| $V_{(BR)SSS}$ | $R_{SS(ON)TYP}$ | I_{SS} |
|---------------|-----------------|----------|
| 20V | 22mΩ@4.5V | 7A |
| | 23mΩ@4.0V | |
| | 24mΩ@3.8V | |
| | 26mΩ@3.1V | |
| | 30mΩ@2.5V | |

Description

The GP4611SP uses advanced trench technology to provide excellent $R_{SS(ON)}$, low gate charge and operation with gate voltages as low as 2.5V while retaining a 12V $V_{GS(MAX)}$ rating. It is ESD protected. This device is suitable for use as a unidirectional or bi-directional load switch, facilitated by its common-drain configuration.

Marking and pin assignment:



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---------------------------------------|-----------|-------------|-------------|
| Source to Source Voltage | V_{SSS} | 20 | V |
| Gate-Source Voltage | V_{GSS} | ± 12 | V |
| Source Current(DC) ¹ | I_S | 7.0 | A |
| Source Current (Pulse) ^{1,2} | I_{SP} | 70 | A |
| Total Dissipation | P_T | 1.4 | W |
| Channel Temperature | T_{ch} | 150 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^{\circ}C$ |

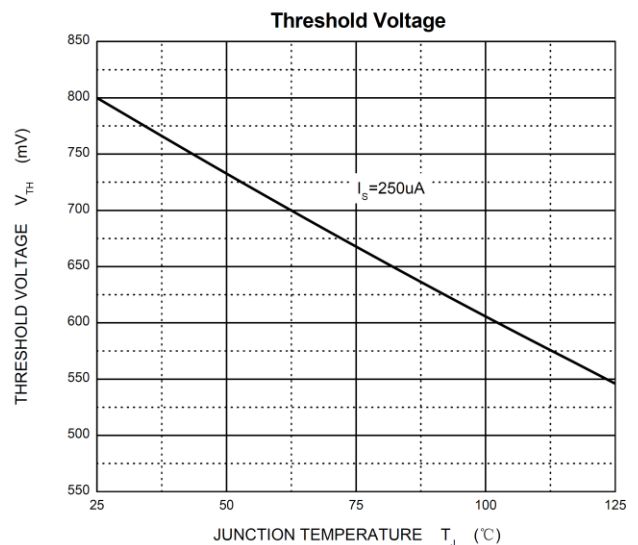
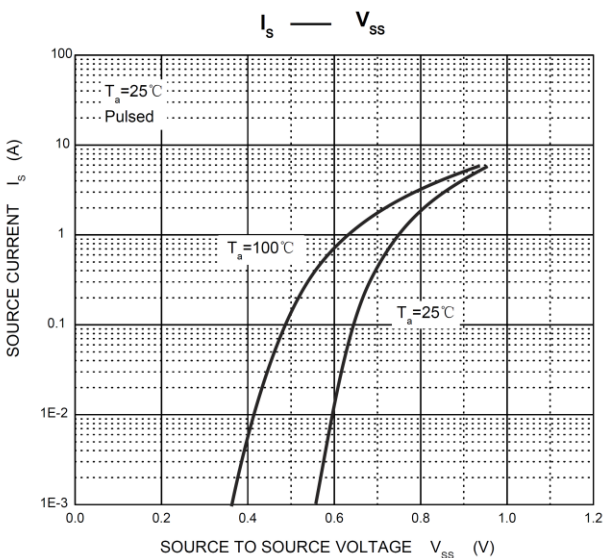
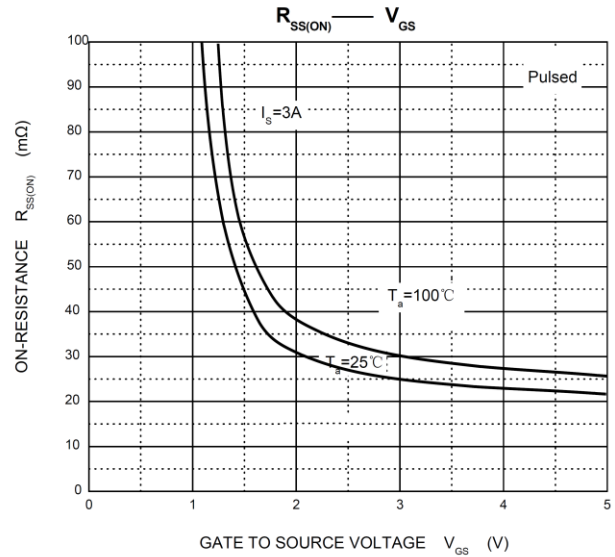
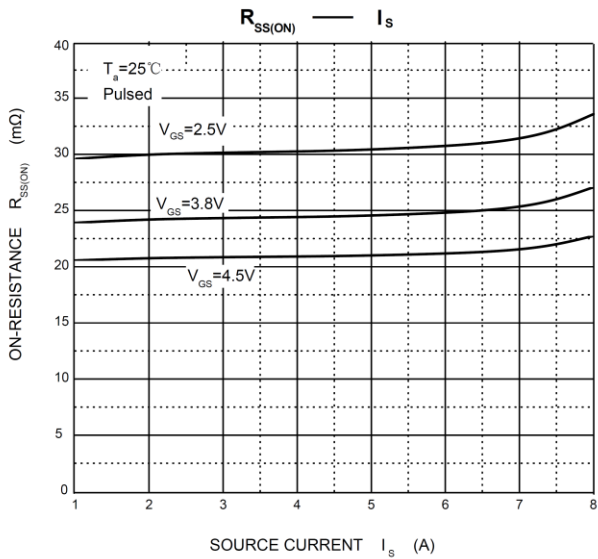
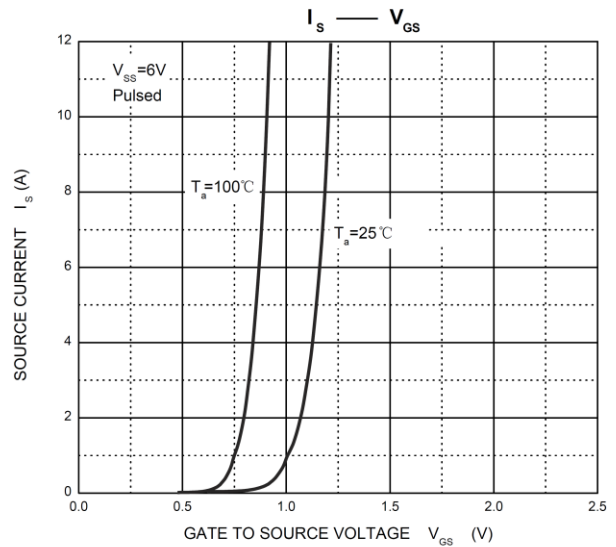
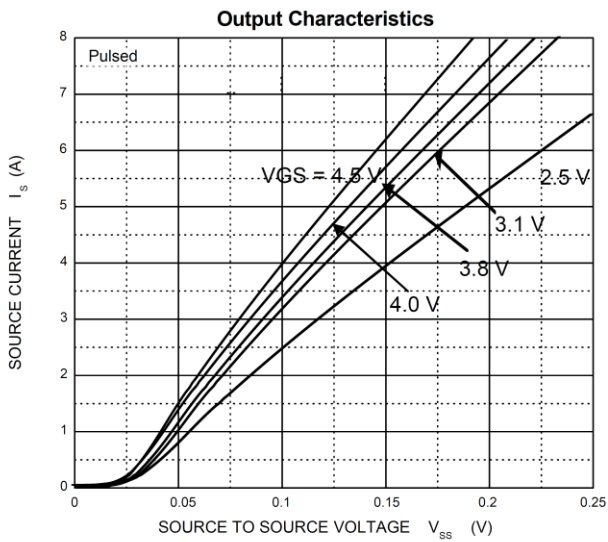
Note:

- 1、 Mounted on FR4 board (25.4mm×25.4mm×t1.0mm) using the minimum recommended pad size (36μm Copper).
- 2、 $t = 10\mu s$, Duty Cycle≤1%

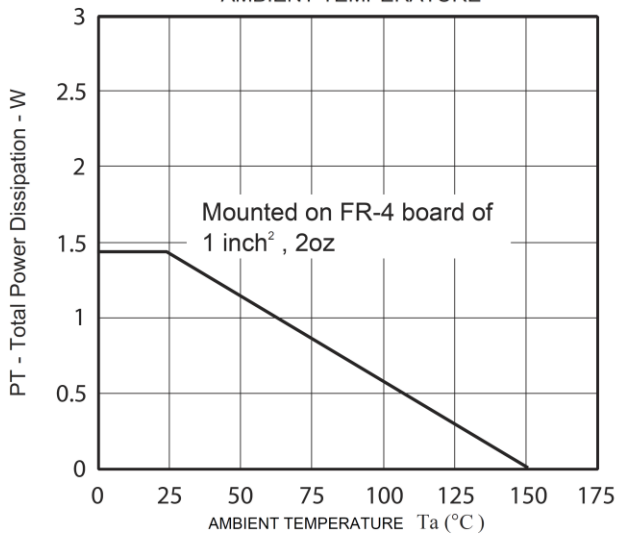
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|---------------------------------------|----------------------|---|-----|------|-----|------|
| Static Parameters | | | | | | |
| Source to Source Breakdown Voltage | BV _{SSS} | I _S =250μA, V _{GS} =0V, | 20 | | | V |
| Zero- Gate Voltage Source Current | I _{SSS} | V _{SS} =20V, V _{GS} =0V | | | 1 | μA |
| Gate to Source Leakage Current | I _{GSS} | V _{SS} =0V, V _{GS} = ±8V | | | ±3 | μA |
| Cutoff Voltage | V _{GS(off)} | V _{SS} =10V, I _S =250μA | 0.5 | 0.8 | 1.3 | V |
| Forward Transfer Admittance | y _{gFS} | V _{SS} =6V, I _S =1A | 1 | 8 | | S |
| Static Source to Source On-Resistance | R _{SS(on)} | V _{GS} =4.5V, I _S =3A | 15 | 22 | 29 | mΩ |
| | | V _{GS} =4.0V, I _S =3A | 16 | 23 | 30 | |
| | | V _{GS} =3.8V, I _S =3A | 17 | 24 | 31 | |
| | | V _{GS} =3.1V, I _S =3A | 18 | 26 | 34 | |
| | | V _{GS} =2.5V, I _S =3A | 21 | 30 | 45 | |
| Turn-on Delay Time | t _{d(on)} | V _{SS} =10V, I _S =3A V _{GS} =4.5V | | 0.7 | | μS |
| Turn-on Rise Time | t _r | | | 3.9 | | |
| Turn-Off Delay Time | t _{d(off)} | | | 11 | | |
| Turn-Off Fall Time | t _f | | | 10 | | |
| Total Gate Charge | Q _g | V _{SS} =10V, I _S =6A, V _{GS} =4.5V | | 7.5 | | nC |
| Diode Forward Voltage | V _{F(S-S)} | V _{GS} =0V, I _S =1A | | | 1.2 | V |

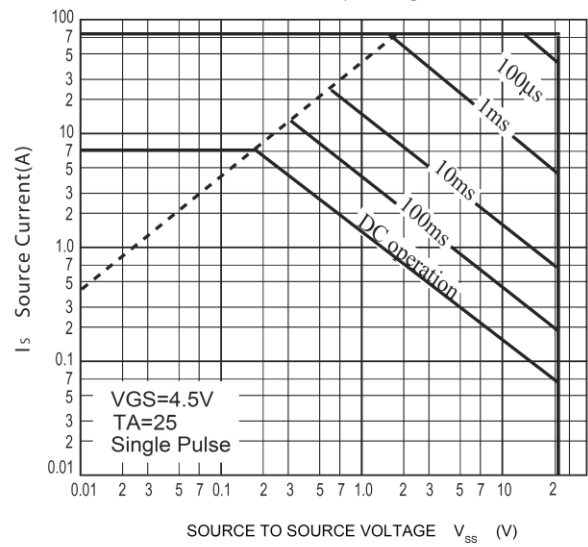
Typical Electrical and Thermal Characteristics



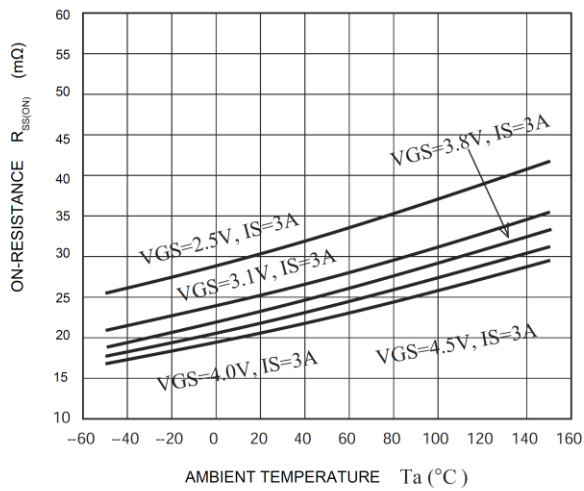
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



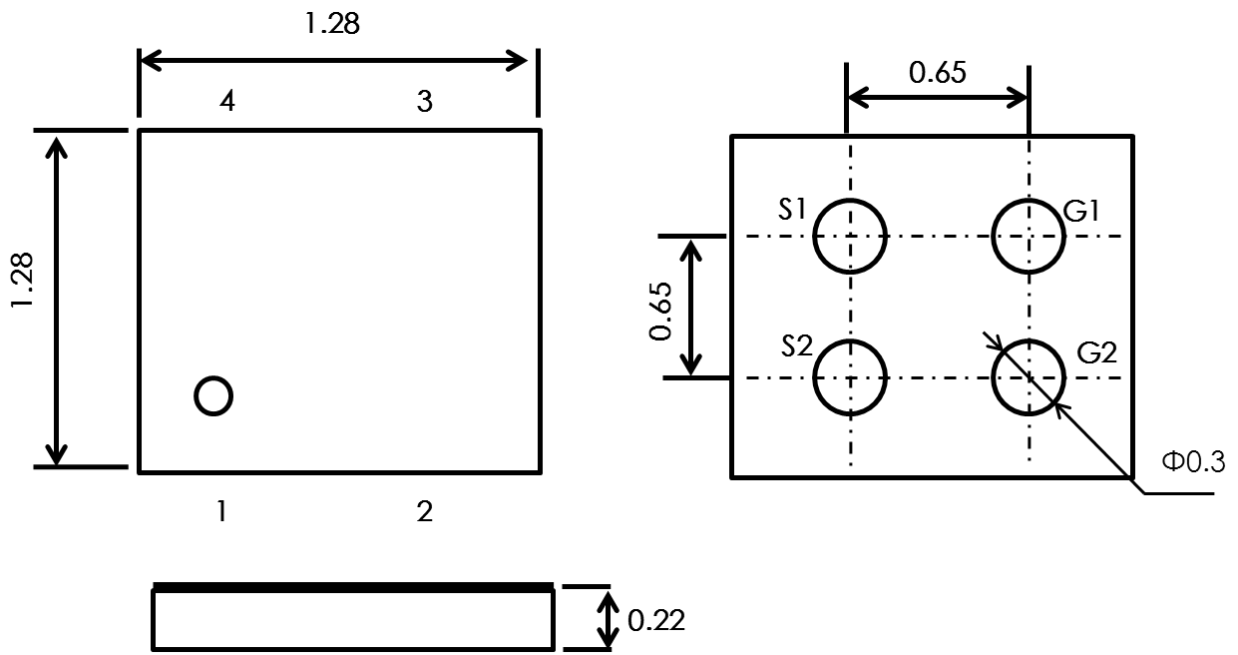
Maximum Safe Operating Area



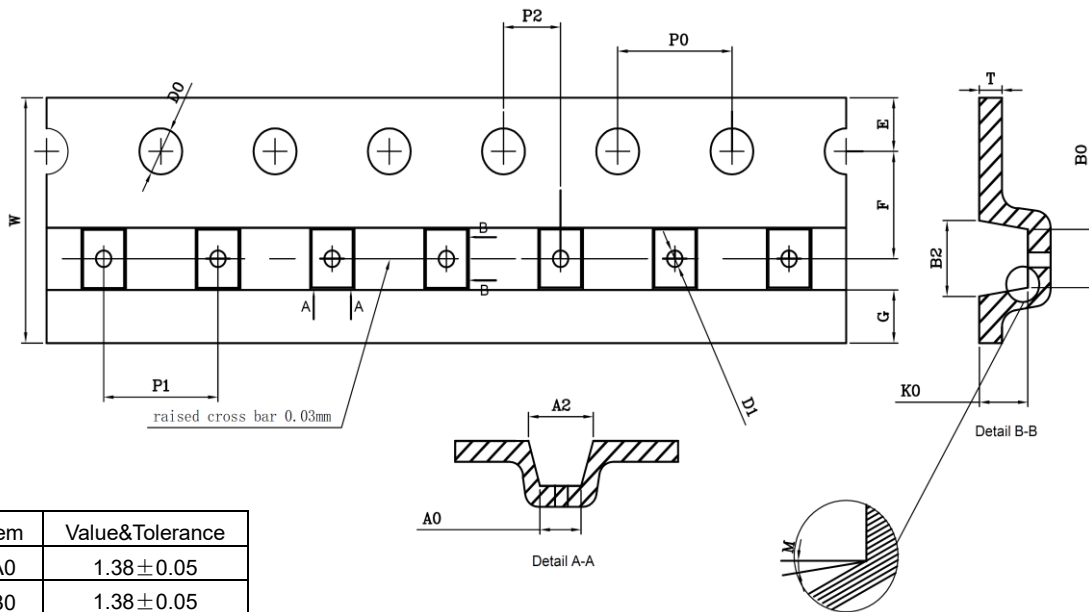
$R_{SS(ON)}$ — T_a



CSPB1313-4 Package Outline Dimensions(Unit:mm)



CSPB1313-4 Tape(Unit:mm)



| Item | Value&Tolerance |
|------|-----------------|
| A0 | 1.38±0.05 |
| B0 | 1.38±0.05 |
| K0 | 0.44±0.05 |
| A2 | NA |
| B2 | NA |
| D0 | 1.50±0.10 |
| D1 | 0.50±0.05 |
| P0 | 4.00±0.10 |
| P1 | 4.00±0.10 |
| P2 | 2.00±0.05 |
| E | 1.75±0.10 |
| F | 3.50±0.05 |
| G | NA |
| T | 0.20±0.02 |
| W | 8.00+0.30/-0.10 |
| M | MAX 3° |

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)