



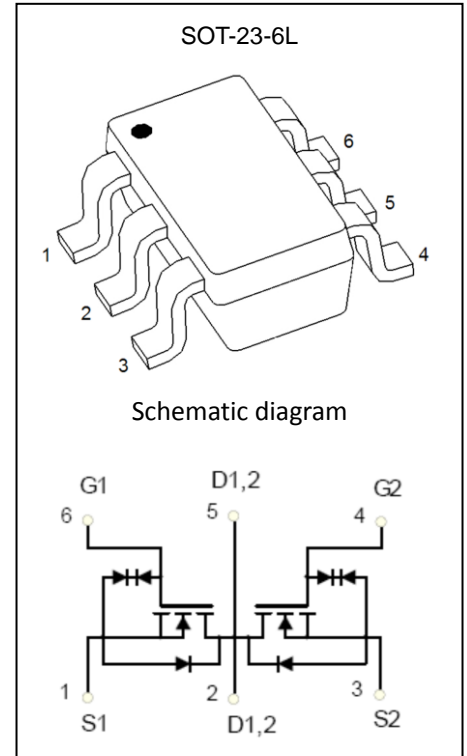
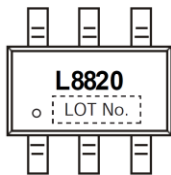
Product Summary

| $V_{(BR)DSS}$ | $R_{DS(on)TYP}$ | I_D |
|---------------|-----------------|-------|
| 20V | 15mΩ@10V | 7A |
| | 17mΩ@4.5V | |
| | 18mΩ@3.8V | |
| | 22mΩ@2.5V | |
| | 34mΩ@1.8V | |

DESCRIPTION

The GP8820L uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. It is ESD protected. This device is suitable for use as a uni-directional or bi-directional load switch, facilitated by its common-drain configuration.

MARKING:



ABSOLUTE 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} | ±12 | V |
| Continuous Drain Current | I_D | 7 | A |
| Pulsed Drain Current | I_{DM}^* | 25 | A |
| Power Dissipation | P_D | 1.5 | W |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 83.3 | $^\circ\text{C/W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55~ +150 | $^\circ\text{C}$ |
| Lead Temperature for Soldering Purposes(1/8" from case for 10s) | T_L | 260 | $^\circ\text{C}$ |

*Repetitive rating: Pluse width limited by junction temperature.

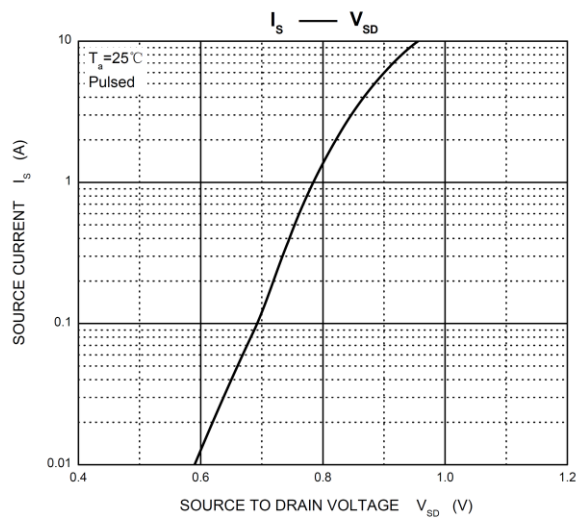
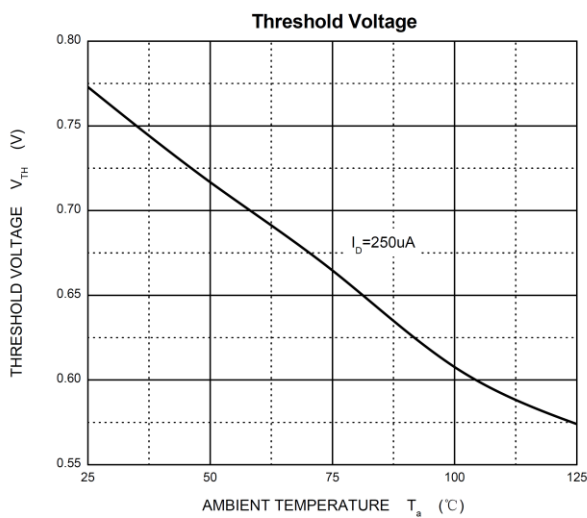
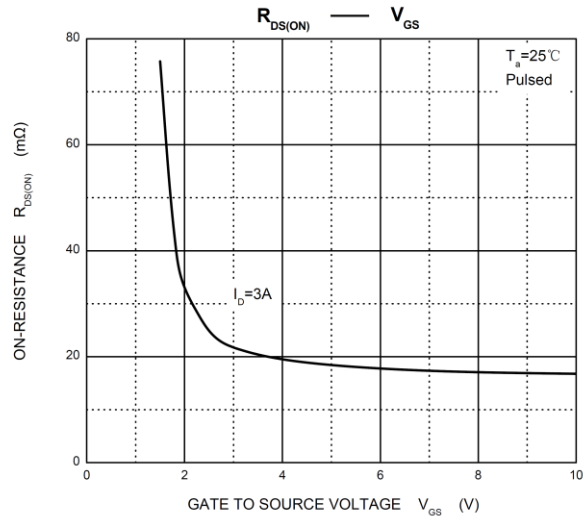
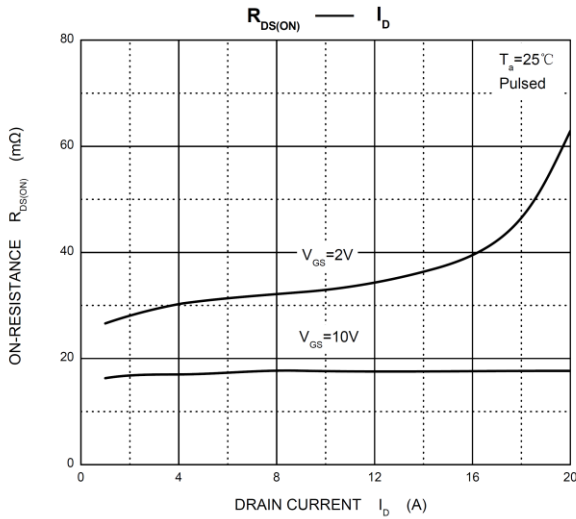
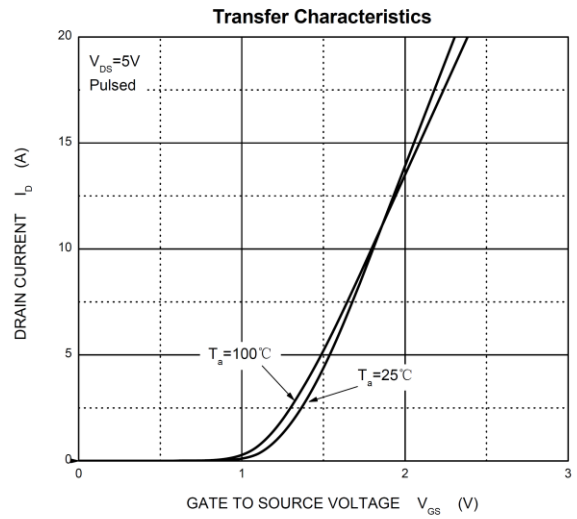
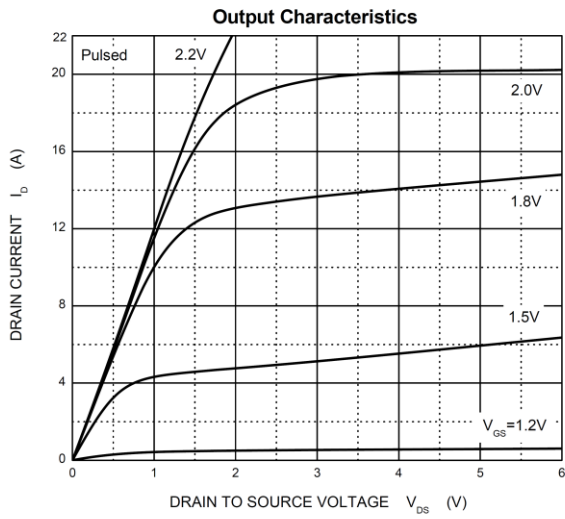
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|--|---------------|--|-----|------|---------|------------|
| Static Characteristics | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = 250\mu A$ | 20 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = 16V, V_{GS} = 0V$ | | | 1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 10V, V_{DS} = 0V$ | | | ± 5 | |
| Gate threshold voltage ⁽¹⁾ | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = 250\mu A$ | 0.5 | 0.75 | 1.1 | V |
| Drain-source on-resistance ⁽¹⁾ | $R_{DS(on)}$ | $V_{GS} = 10V, I_D = 3A$ | 12 | 15 | 21 | m Ω |
| | | $V_{GS} = 4.5V, I_D = 3A$ | 14 | 17 | 24 | |
| | | $V_{GS} = 3.8V, I_D = 3A$ | 15 | 18 | 28 | |
| | | $V_{GS} = 2.5V, I_D = 3A$ | 18 | 22 | 32 | |
| | | $V_{GS} = 1.8V, I_D = 3A$ | 29 | 34 | 50 | |
| Forward transconductance ⁽¹⁾ | g_{FS} | $V_{DS} = 5V, I_D = 7A$ | 9 | | | S |
| Diode Forward voltage ⁽¹⁾ | V_{DS} | $V_{GS} = 0V, I_S = 1A$ | | | 1 | V |
| Dynamic characteristics⁽²⁾ | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$ | | 650 | | μF |
| Output Capacitance | C_{oss} | | | 140 | | |
| Reverse Transfer Capacitance | C_{rss} | | | 60 | | |
| Total gate charge | Q_g | $V_{DS} = 10V, V_{GS} = 4.5V, I_D = 6A$ | | 8 | | nC |
| Gate-source charge | Q_{gs} | | | 2.5 | | |
| Gate-drain charge | Q_{gd} | | | 3 | | |
| Switching Characteristics⁽²⁾ | | | | | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{GS} = 5V, V_{DD} = 10V,$ $R_L = 1.5\Omega, R_{GEN} = 3\Omega$ | | 0.5 | | ns |
| Turn-on rise time | t_r | | | 1 | | |
| Turn-off delay time | $t_{d(off)}$ | | | 12 | | |
| Turn-off fall time | t_f | | | 4 | | |
| Source-Drain Diode characteristics | | | | | | |

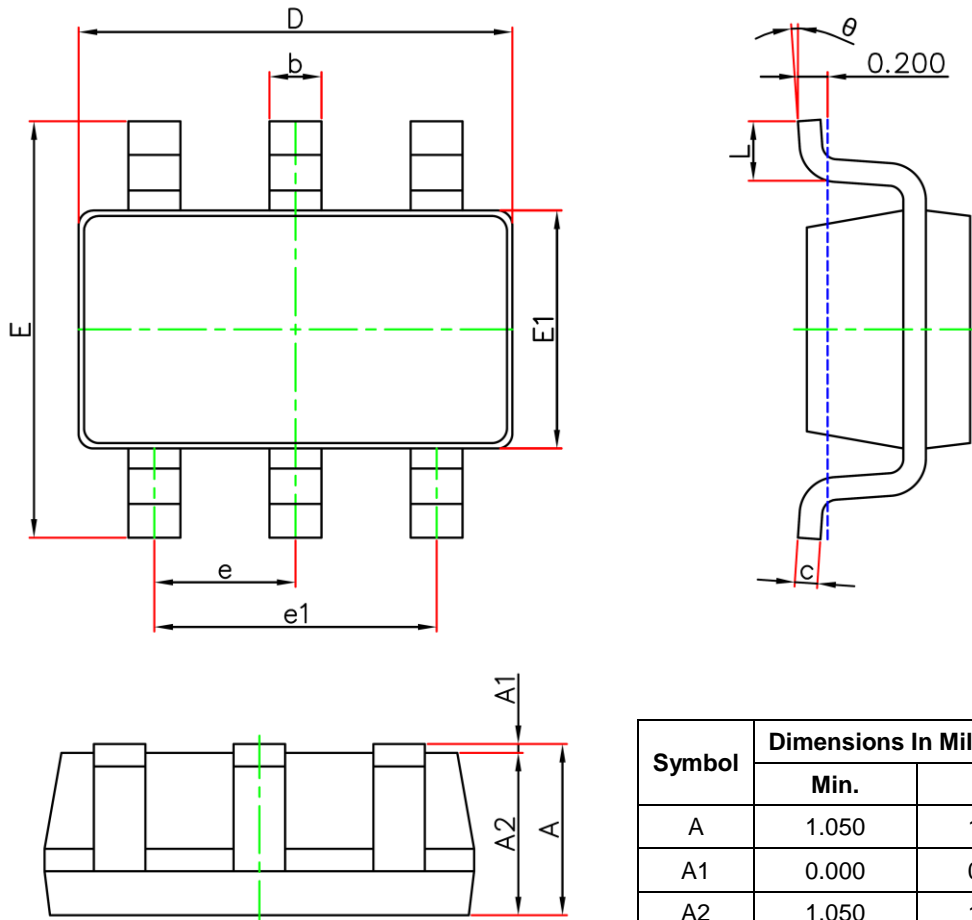
Notes :

1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics



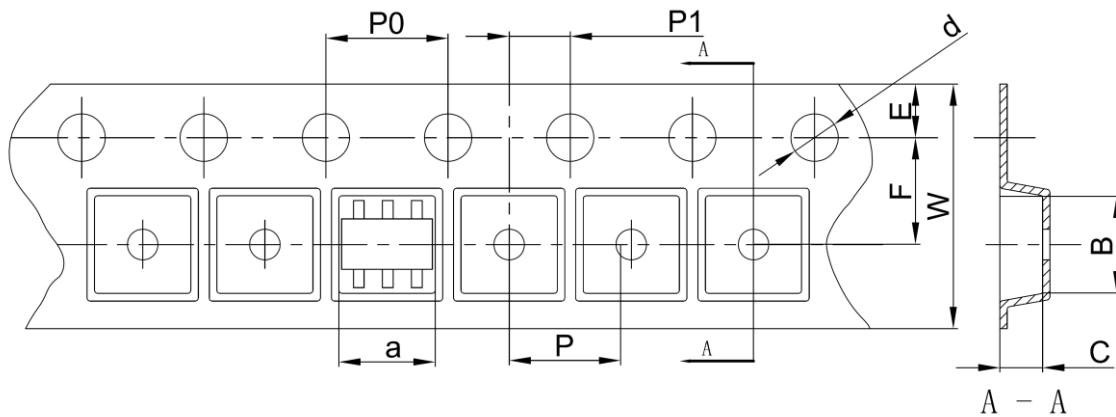
SOT-23-6L Package Information



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 2.820 | 3.020 | 0.111 | 0.119 |
| E1 | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.650 | 2.950 | 0.104 | 0.116 |
| e | 0.950(BSC) | | 0.037(BSC) | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.300 | 0.600 | 0.012 | 0.024 |
| θ | 0° | 8° | 0° | 8° |

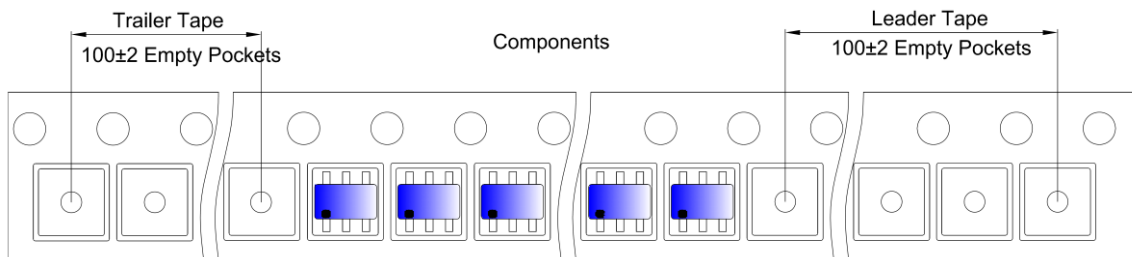
SOT-23-6L Tape and Reel

SOT-23-6L Embossed Carrier Tape

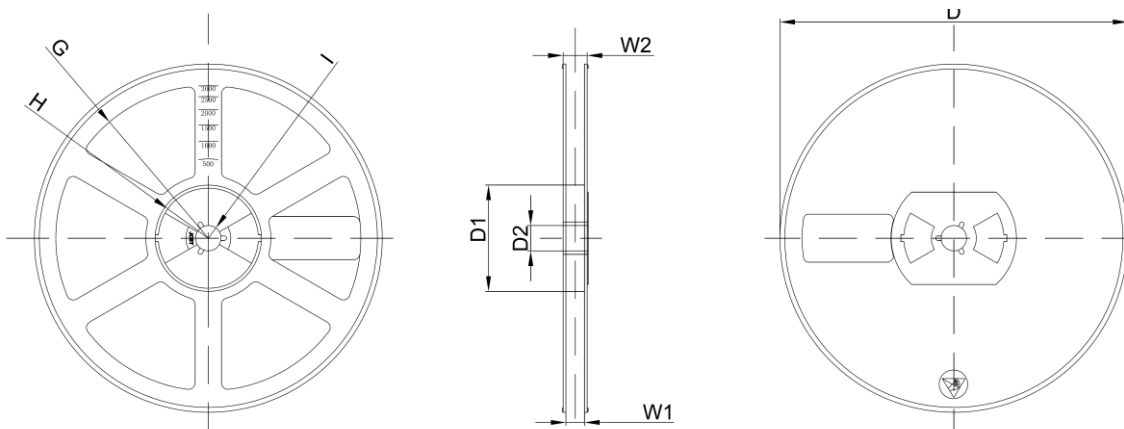


| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type | a | B | C | d | E | F | P0 | P | P1 | W |
| SOT-23-6L | 3.17 | 3.23 | 1.37 | Φ1.55 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23-6L Tape Leader and Trailer



SOT-23-6L Reel



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
| 7` Dia | Φ180.00 | 60.00 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| Reel | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|---------|-----------|-----------|--------------|------------|-----------------|----------|
| 3000pcs | 7 inch | 30,000pcs | 203×203×195 | 120,000pcs | 438×438×220 | |

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)