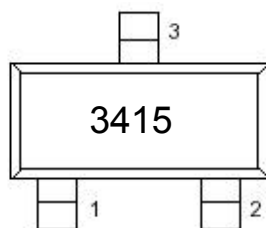


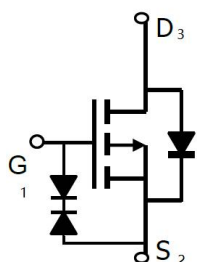
CDL3415-ME

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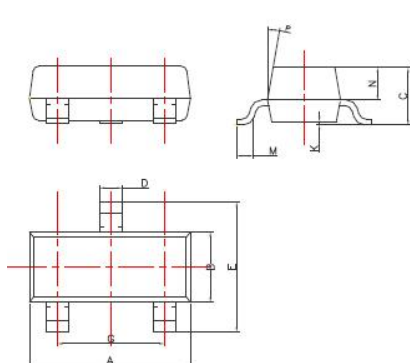
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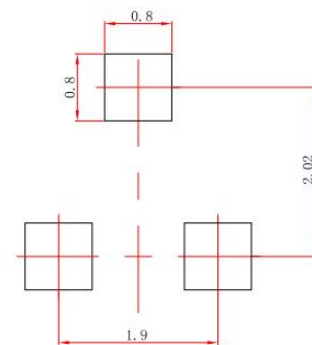
Top view



SOT-23 Dimension



| DIM | Millimeters |
|-----|-------------|
| A | 2.85~3.04 |
| B | 1.30±0.10 |
| C | 1.00±0.10 |
| D | 0.45±0.05 |
| E | 2.25~2.55 |
| G | 1.90±0.1 |
| K | 0.00-0.10 |
| M | 0.20 MIN |
| N | 0.60±0.10 |
| P | 7±2° |

SOT-23
Suggested Layout

mm(±0.05mm)

MAXIMUM RATINGS (T_a=25°C)

| Characteristic | Symbol | Rating | Unit |
|--------------------------|------------------|--------|------|
| Drain-Source Voltage | V _{DSS} | -20 | Vdc |
| Gate-Source Voltage | V _{GSS} | ±8 | Vdc |
| Drain Current—Continuous | I _D | -4.0 | Adc |
| Peak Drain Current | I _{DM} | 10 | Adc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--|--------------------------------------|---------------------|------|
| Total Device Dissipation FR-5 Board(1) TA=25°C | PD | 225 | mW |
| Total Device Dissipation Alumina Substrate,(2) TA=25°C | PD | 300 | mW |
| Junction and Storage Temperature | T _J , T _{stg} | 150, -55 to +150 | °C |

1. FR-5=1.0×0.75×0.062in, printed-circuit board.2. Alumina=0.4×0.3×0.024in, 99.5%alumina

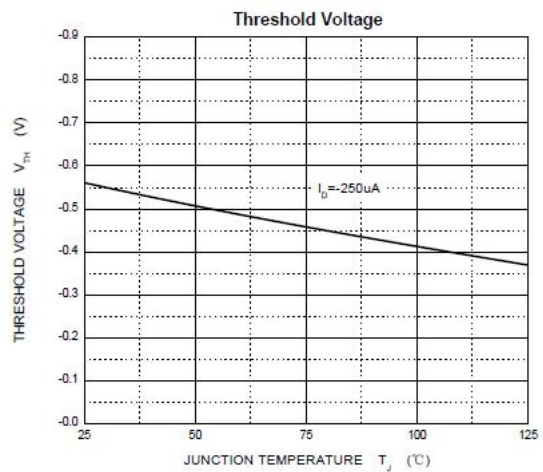
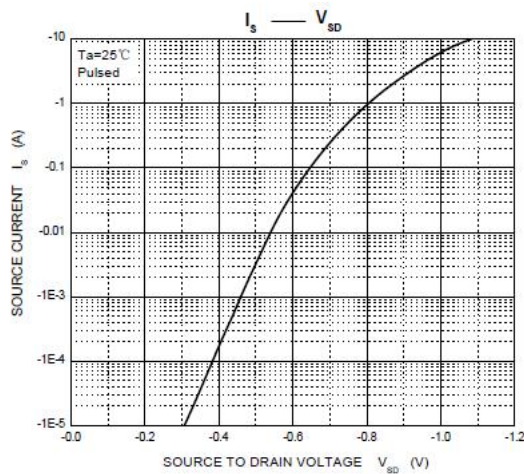
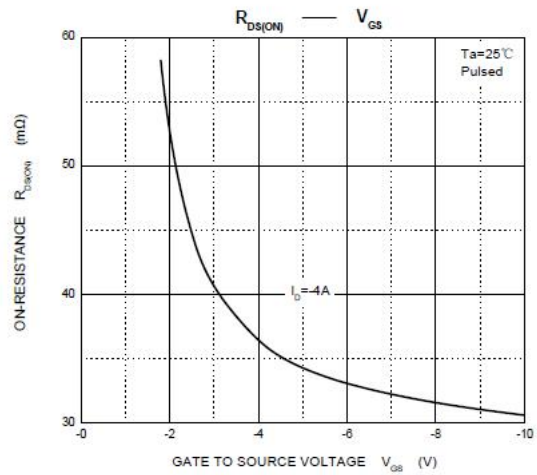
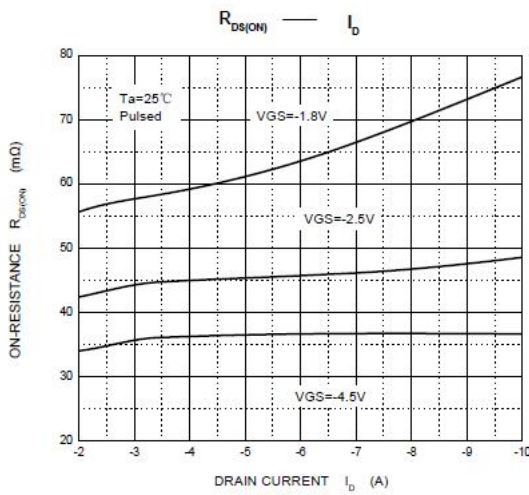
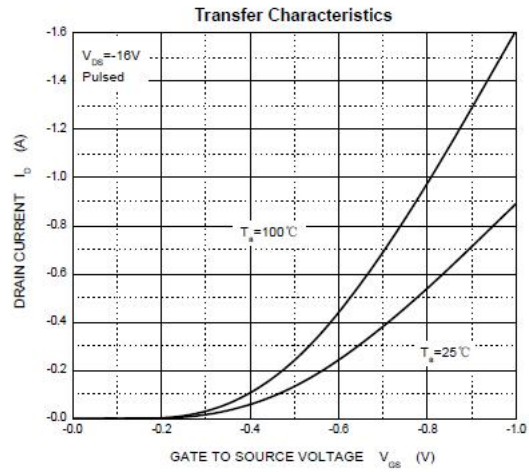
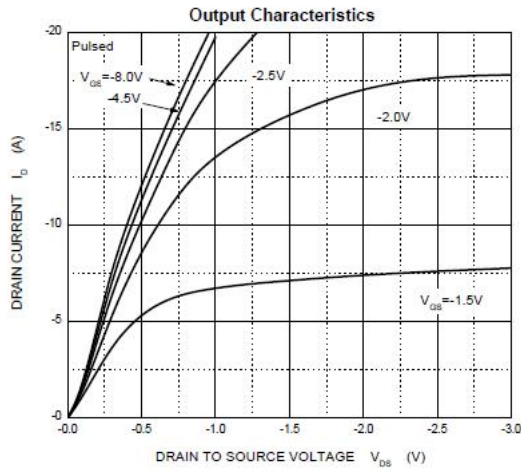
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise noted)

| Characteristic | Symbol | Test Condition | Min | Type | Max | Unit |
|---|----------------------|--|------|----------|----------|------|
| Drain-Source Breakdown Voltage | V _{(BR)DSS} | V _{GS} =0V, I _D =-250μA | -20 | - | - | V |
| Zero Gate Voltage Drain Current | I _{DSS} | V _{DS} =-16V, V _{GS} =0V | - | - | -1.0 | μA |
| Gate-Body Leakage Current, Forward | I _{GSS} | V _{GS} =±8V | - | - | ±10 | nA |
| Gate Threshold Voltage | V _{GS(th)} | V _{DS} =V _{GS} , I _D =-250μA | -0.3 | -0.6 | -1.0 | V |
| Static Drain-Source On-State Resistance | R _{DS(on)} | V _{GS} =-4.5V, I _D =-4.0A V _{GS} =-2.5V, I _D =-3.0A | - | 30 40 | 50 60 | mΩ |
| Forward Transconductance | g _{fs} | V _{DS} =-5V, I _D =-4.0A | 8 | - | - | S |
| Diode Forward On-Voltage | V _{SD} | V _{GS} =0V, I _S =-1.0A | - | - | -1.2 | V |
| Turn-On Delay Time | t _{d(on)} | V _{DD} = -10V, I _D = 2.0A, R _L = 2.5Ω, V _{GS} = -4.5V, R _{GEN} = 3Ω | - | 9.5 | - | ns |
| Turn-On Time | t _r | | - | 17 | - | |
| Turn-Off Delay Time | t _{d(off)} | | - | 94 | - | |
| Turn-On Fall Time | t _f | | - | 35 | - | |
| Input Capacitance | C _{iss} | V _{DS} = -10V, V _{GS} = 0V, f = 1.0 MHz | - | 1450 | - | pF |
| Output Capacitance | C _{oss} | | - | 205 | - | |
| Reverse Transfer Capacitance | C _{rss} | | - | 160 | - | |
| Total Gate Charge | Q _G | V _{DS} = -10V, I _D = -4.0A, V _{GS} = -4.5V | - | 17.2 | - | nC |
| Gate to source charge | Q _{GS} | | - | 1.3 | - | |
| Gate to drain charge | Q _{GD} | | - | 4.5 | - | |

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Typical Performance Characteristics



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.