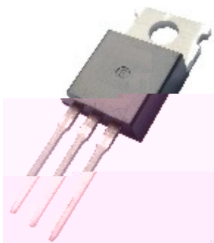
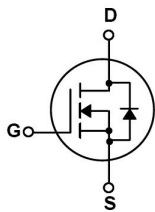


TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

Low gate charge, low crss, fast switching.

DC/DC

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

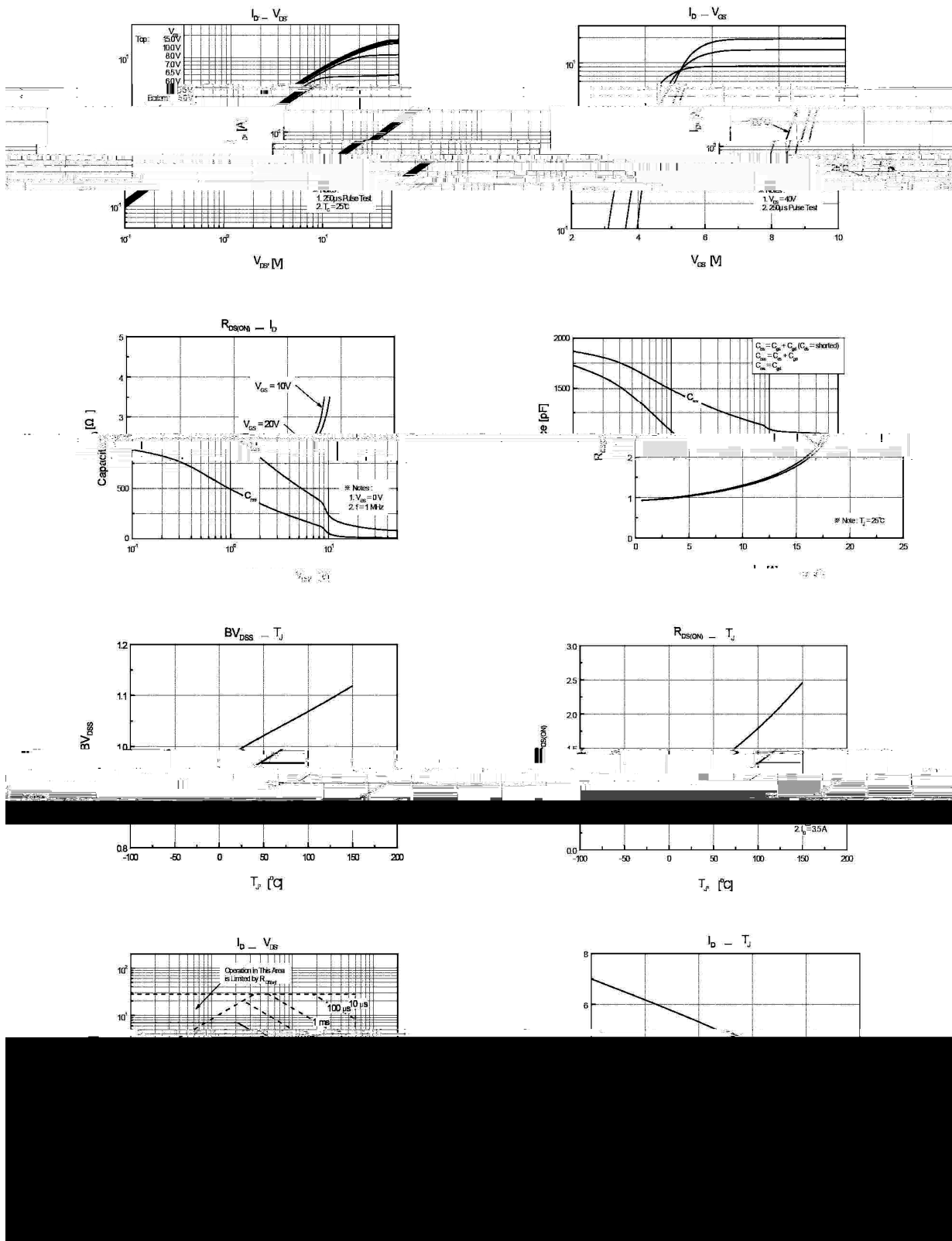


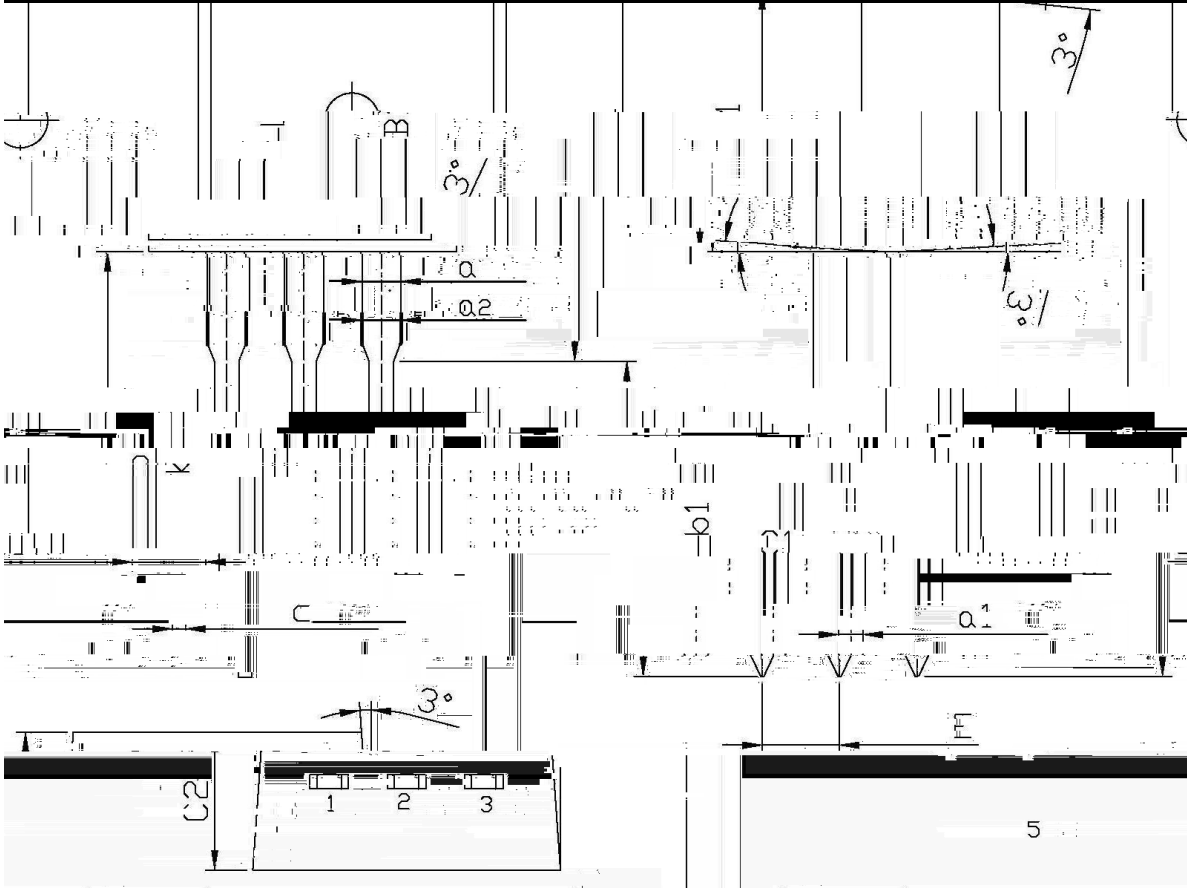
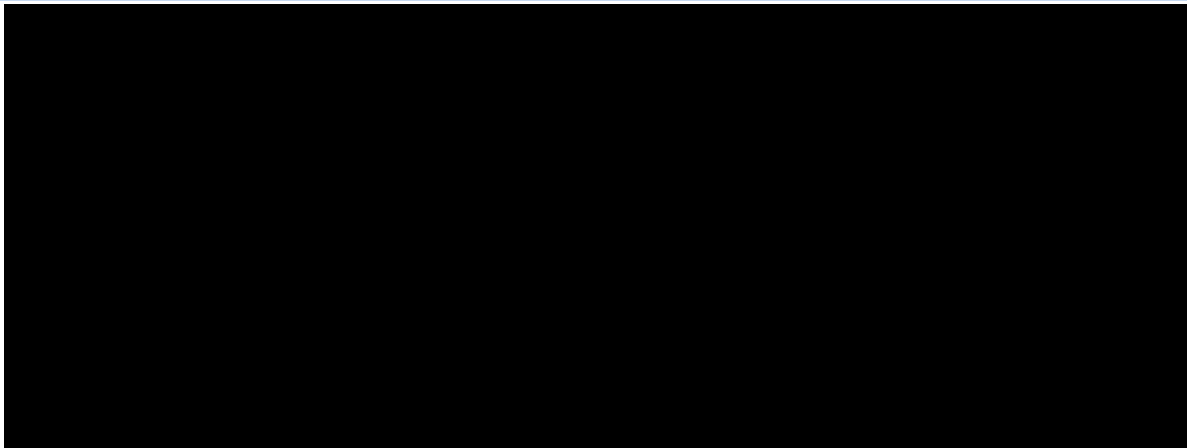
PIN 1 G PIN 2 D PIN 3 S

See Marking Instructions.

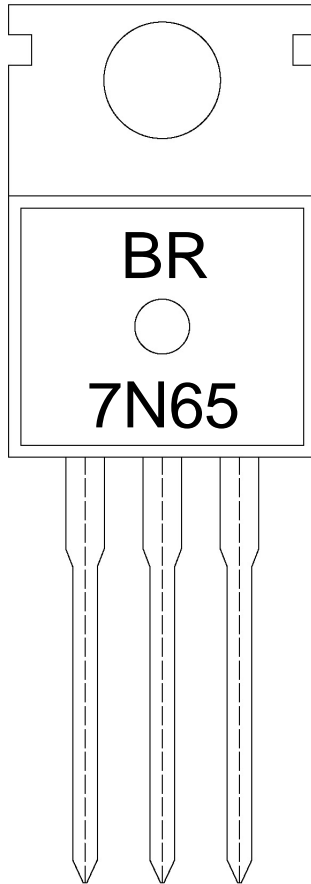
| Parameter | Symbol | Rating | Unit |
|---|------------------------------|------------|------------------|
| Drain-Source Voltage | V_{DSS} | 650 | V |
| Drain Current | $I_D(T_C=25^\circ\text{C})$ | 7.0 | A |
| Drain Current | $I_D(T_C=100^\circ\text{C})$ | 4.4 | A |
| Drain Current - Pulsed | I_{DM} | 28 | A |
| Gate-Source Voltage | V_{GS} | ± 30 | V |
| Single Pulsed Avalanche Energy | E_{AS} | 420 | mJ |
| Repetitive Avalanche Energy | E_{AR} | 14.7 | mJ |
| Avalanche Current | I_{AR} | 7.0 | A |
| Power Dissipation | $P_D(T_C=25^\circ\text{C})$ | 147 | W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to 150 | $^\circ\text{C}$ |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|------------------------------------|--------------|---|-----|------|-----------|---------|
| Drain-Source Breakdown Voltage | BV_{DSS} | $V_{GS}=0V$ $I_D=250\mu A$ | 650 | | | V |
| Zero Gate Voltage Drain Current | I_{DSS} | $V_{DS}=650V$ $V_{GS}=0V$ | | | 1.0 | μA |
| | | $V_{DS}=520V$ $T_C=125^\circ\text{C}$ | | | 100 | μA |
| Gate-Body Leakage Current, Forward | I_{GSS} | $V_{GS}=\pm 30V$ $V_{DS}=0V$ | | | ± 100 | nA |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}=V_{GS}$ $I_D=250\mu A$ | 2.0 | | 4.0 | V |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}=10V$ $I_D=3.5A$ | | | 1.3 | |
| Forward Transconductance | g_{FS} | $V_{DS}=40V$ $I_D=3.5A$ | | 8.2 | | S |
| Drain-Source Diode Forward Voltage | V_{SD} | $V_{GS}=0V$ $I_S=7.0A$ | | | 1.4 | V |
| Input Capacitance | C_{iss} | $V_{DS}=25V$ $V_{GS}=0V$ $f=1.0\text{MHz}$ | | 1100 | 1500 | pF |
| Output Capacitance | C_{oss} | | | 110 | 150 | pF |





| Symbol | Dimensions in Millimeters | | Symbol | Dimensions in Millimeters | |
|----------|---------------------------|------|----------|---------------------------|------|
| | Min | Max | | Min | Max |
| Δ | 9.8 | 10.2 | C | 1.2 | 1.4 |
| ϕ | 3.56 | 3.64 | ϕB | 6.3 | 6.7 |
| L | 15.7 | 16.1 | B1 | 9.0 | 9.4 |
| b | 12.6 | 13.6 | C1 | 2.2 | 2.6 |
| b1 | 9.6 | 10.6 | d1 | 0.7 | 1.0 |
| ϕ | 1.25 | 1.45 | ϕ | 1.25 | 1.45 |
| E | 2.34 | 2.74 | F | 2.34 | 2.74 |
| 0.2 | 1.25 | 1.45 | | | |



BR

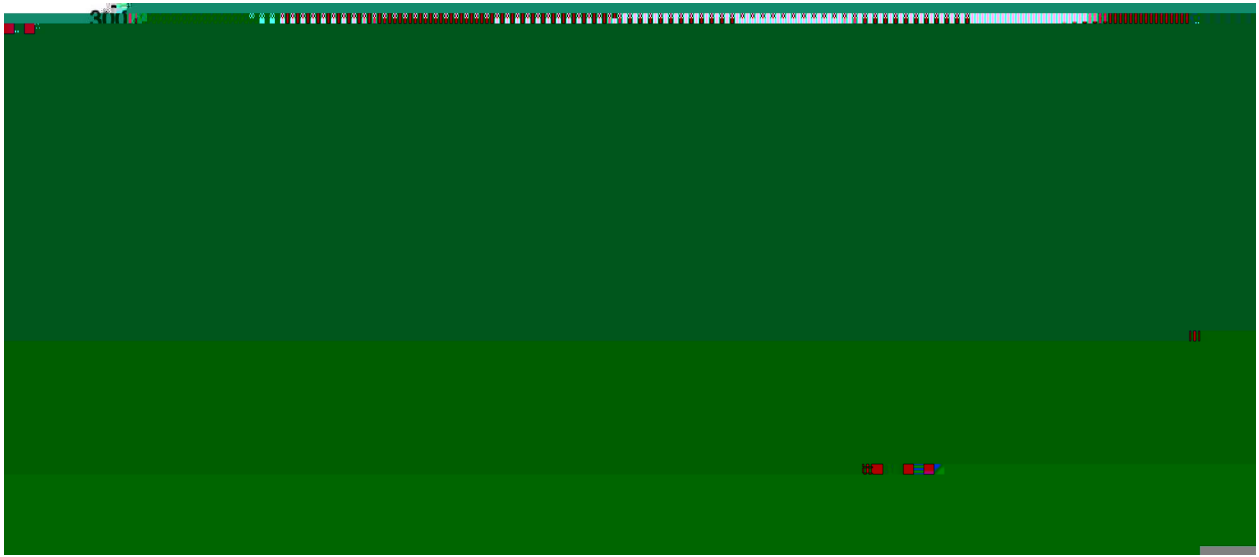
7N65

Note:

BR: Company Code

7N65: Product Type.

****: Lot No. Code, code change with Lot No.



Note:

1 25 150