

BMS3003

Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|----------|-----------------------------|---------------------------------|-------|------|------|
| | | | min | typ | max | |
| Drain to Source Breakdown Voltage | V(BR)DSS | ID=-1mA, VGS=0V | -60 | | | V |
| Zero-Gate Voltage Drain Current | IDSS | VDS=-60V, VGS=0V | | | -10 | μA |
| Gate to Source Leakage Current | IGSS | VGS=±16V, VDS=0V | | | ±10 | μA |
| Cutoff Voltage | VGS(off) | VDS=-10V, ID=-1mA | -1.2 | | -2.6 | V |
| Forward Transfer Admittance | yfs | VDS=-10V, ID=-39A | | 130 | | S |
| Static Drain to Source On-State Resistance | RDS(on)1 | ID=-39A, VGS=-10V | | 5.0 | 6.5 | mΩ |
| | RDS(on)2 | ID=-39A, VGS=-4V | | 6.5 | 9.0 | mΩ |
| Input Capacitance | Ciss | VDS=-20V, f=1MHz | | 13200 | | pF |
| Output Capacitance | Coss | | | 1300 | | pF |
| Reverse Transfer Capacitance | Crss | | | 950 | | pF |
| Turn-ON Delay Time | td(on) | See Fig.2 | | 90 | | ns |
| Rise Time | tr | | | 360 | | ns |
| Turn-OFF Delay Time | td(off) | | | 1200 | | ns |
| Fall Time | tf | | | 680 | | ns |
| Total Gate Charge | Qg | | | | 285 | |
| Gate to Source Charge | Qgs | VDS=-36V, VGS=-10V, ID=-78A | | 35 | | nC |
| Gate to Drain "Miller" Charge | Qgd | | | 70 | | nC |
| Diode Forward Voltage | VSD | | IS=-78A, VGS=0V | -0.95 | -1.5 | |
| Reverse Recovery Time | trr | See Fig.3 | | 150 | | ns |
| Reverse Recovery Charge | Qrr | | IS=-78A, VGS=0V, di/dt=-100A/μs | | 470 | |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Fig.1 Unclamped Inductive Switching Test Circuit

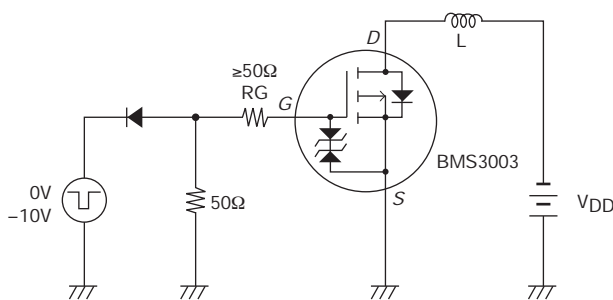


Fig.2 Switching Time Test Circuit

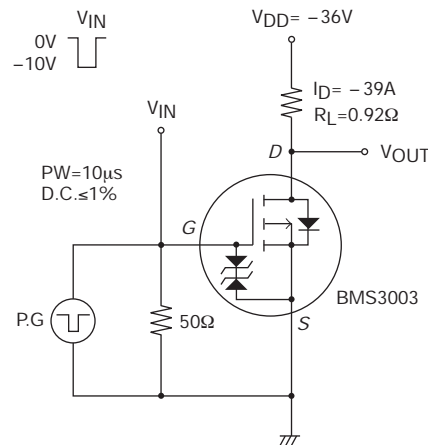
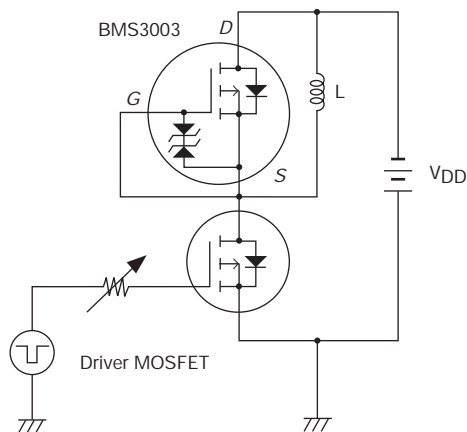
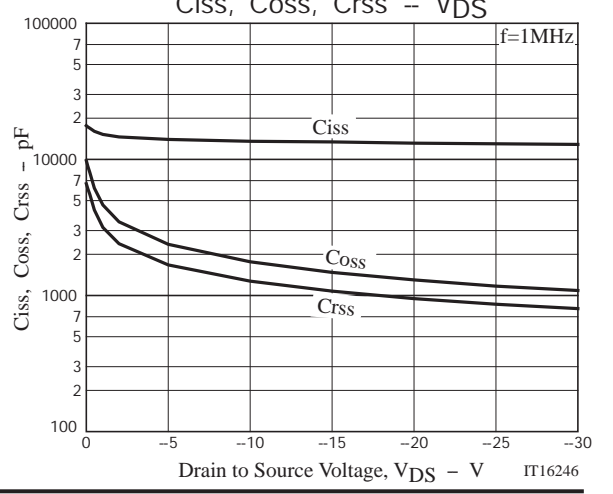
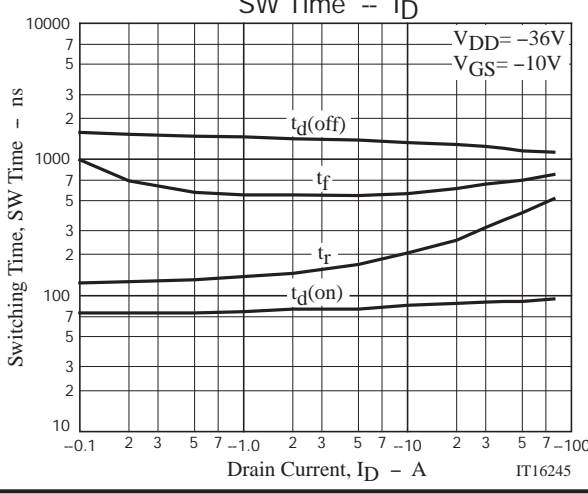
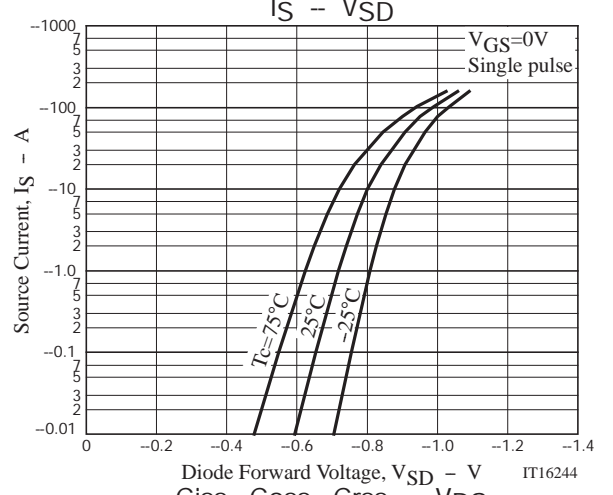
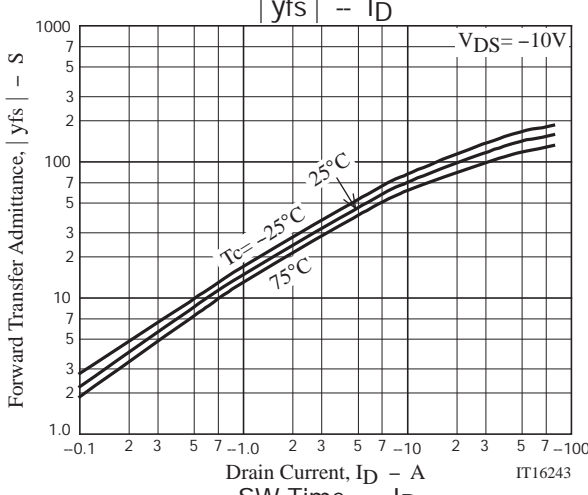
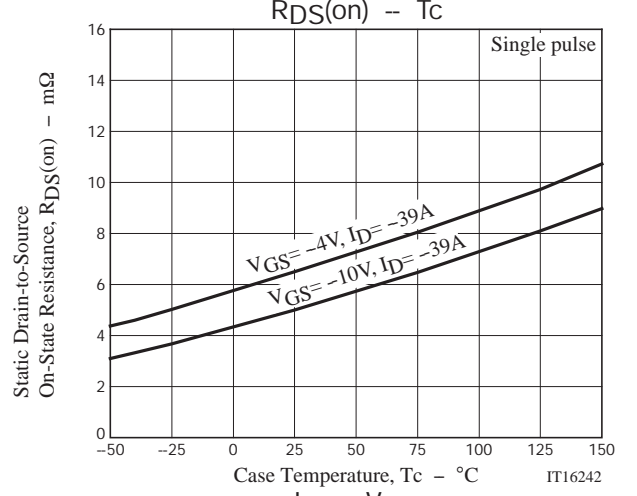
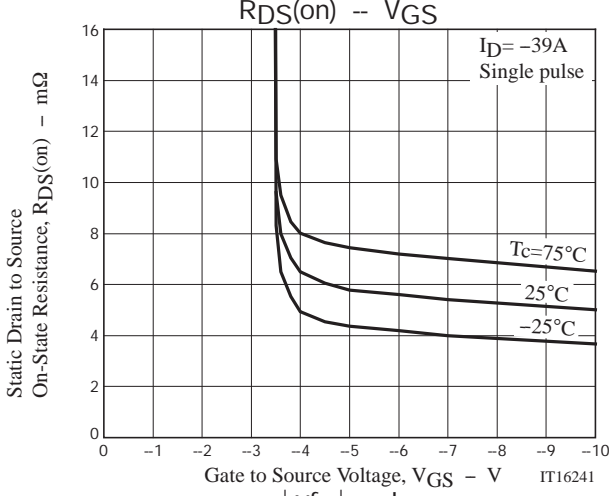
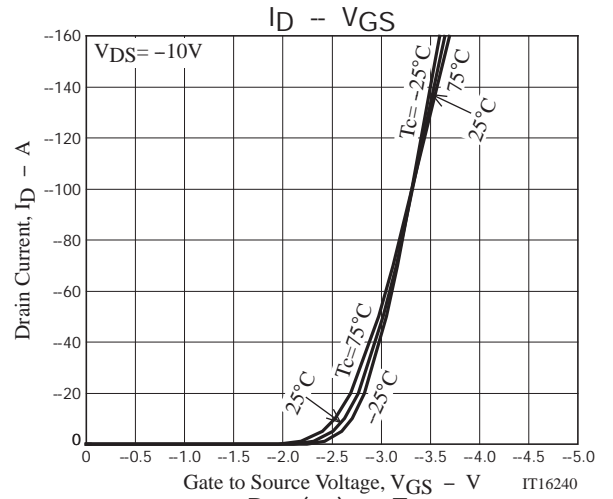
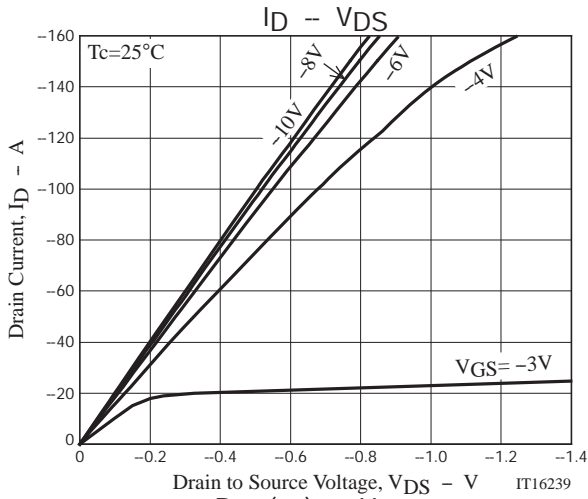


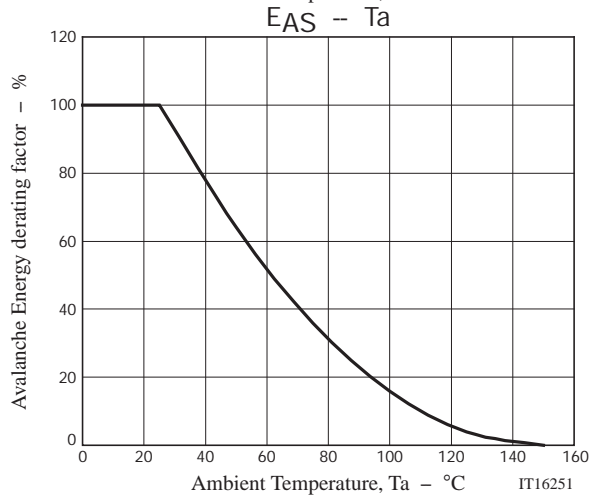
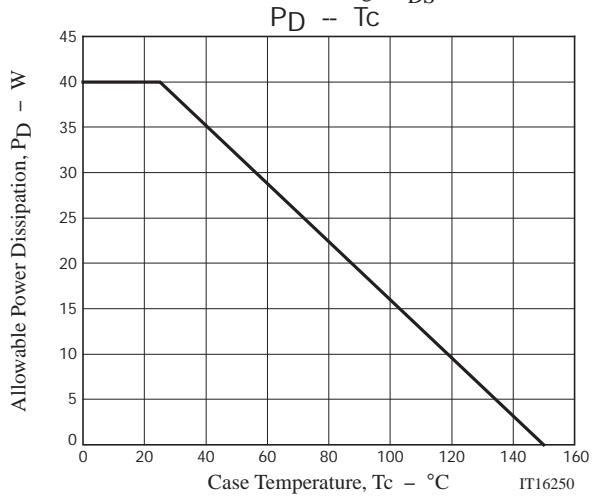
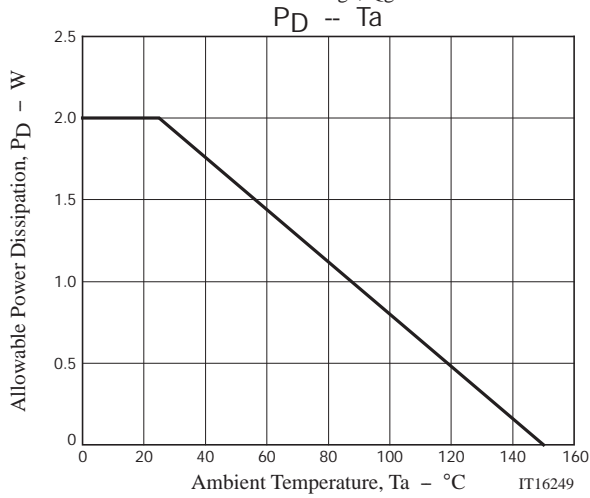
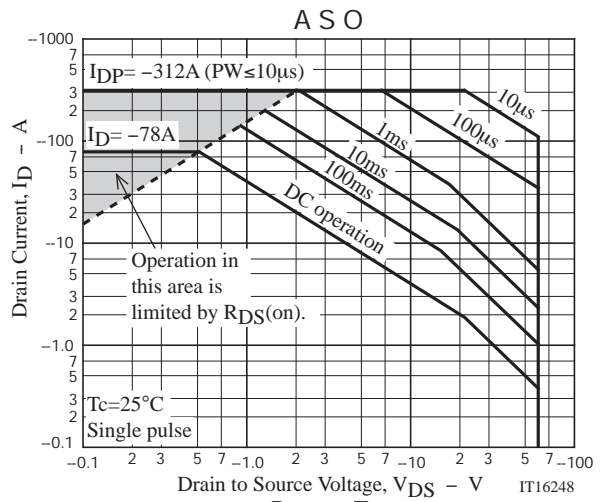
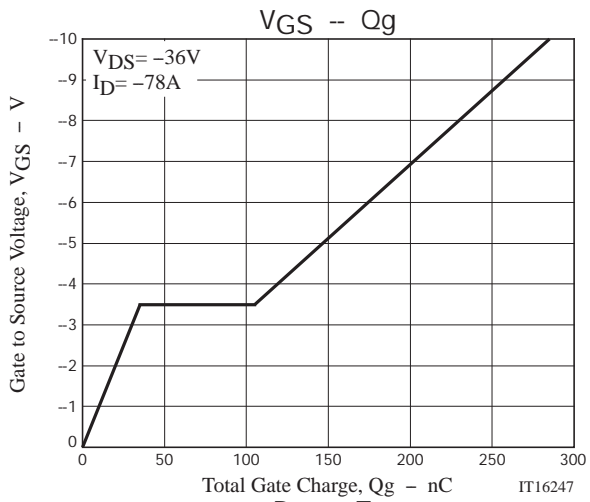
Fig.3 Reverse Recovery Time Test Circuit



Ordering Information

| Device | Package | Shipping | memo |
|------------|-------------|-------------|---------|
| BMS3003-1E | TO-220F-3SG | 50pcs./tube | Pb Free |

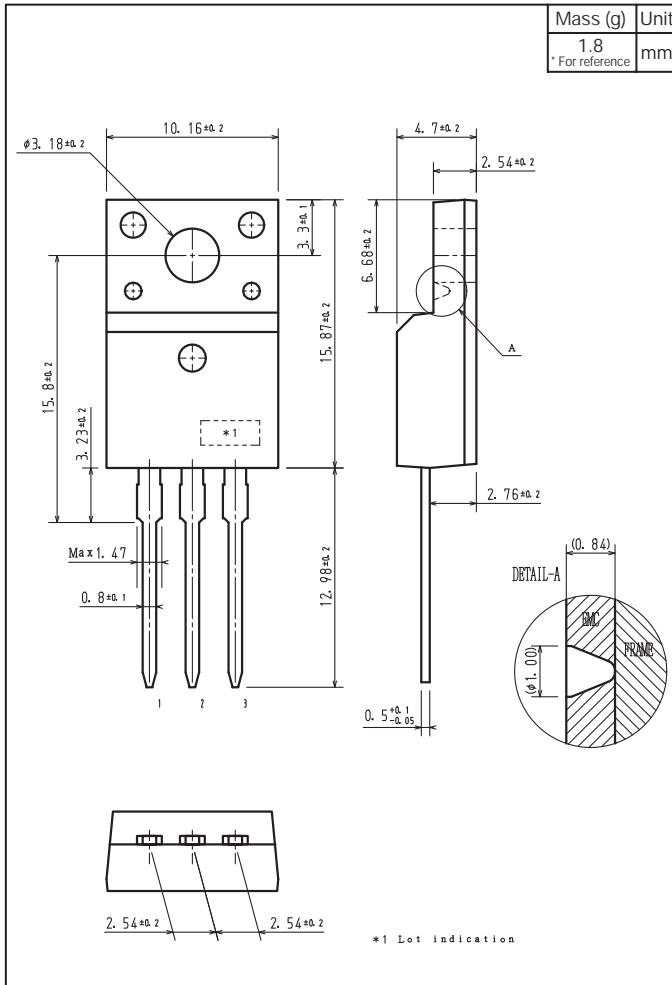




BMS3003

Outline Drawing

BMS3003-1E



Note on usage : Since the BMS3003 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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