



2SJ637

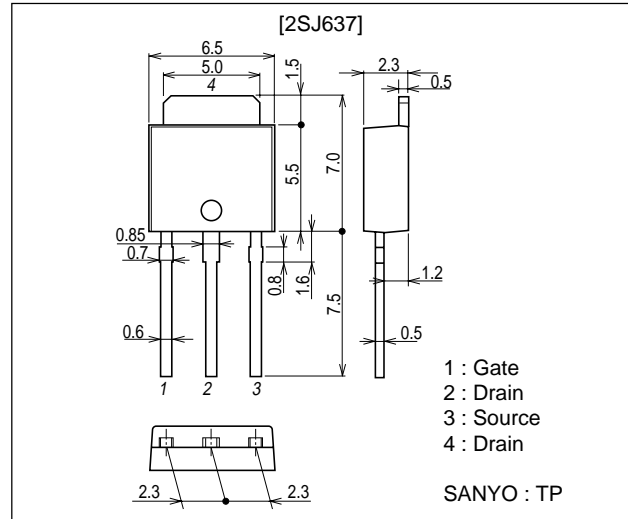
DC / DC Converter Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V drive.

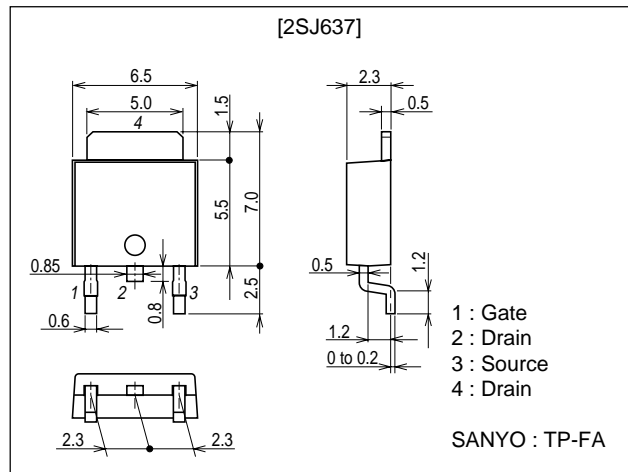
Package Dimensions

unit : mm
2083B



Package Dimensions

unit : mm
2092B



■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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Specifications

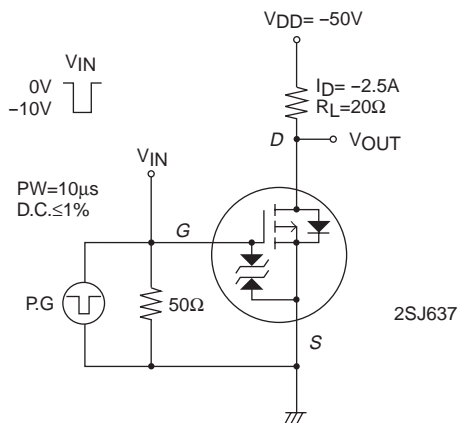
Absolute Maximum Ratings at Ta=25°C

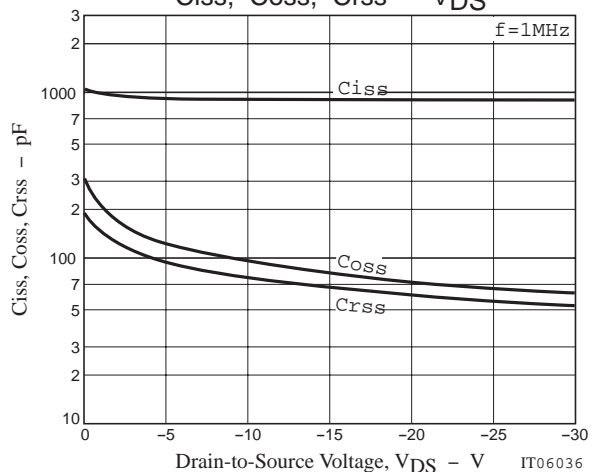
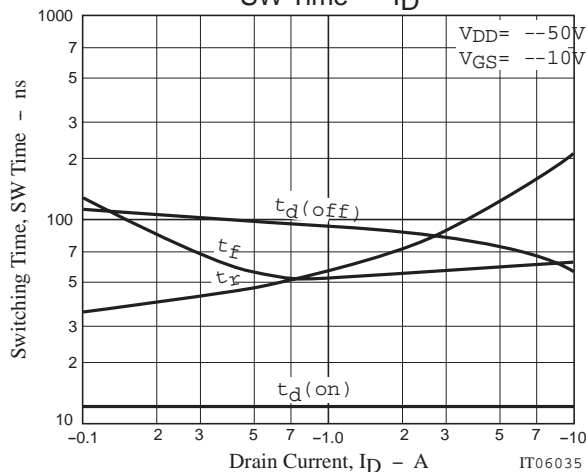
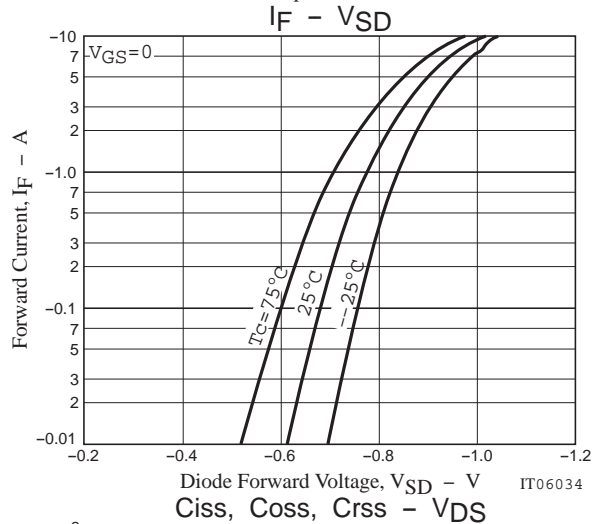
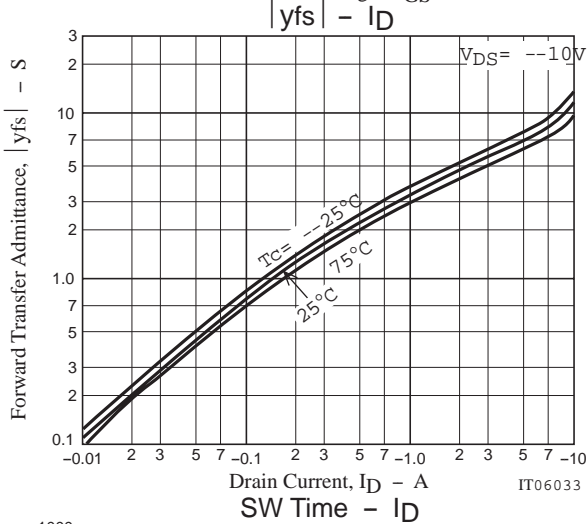
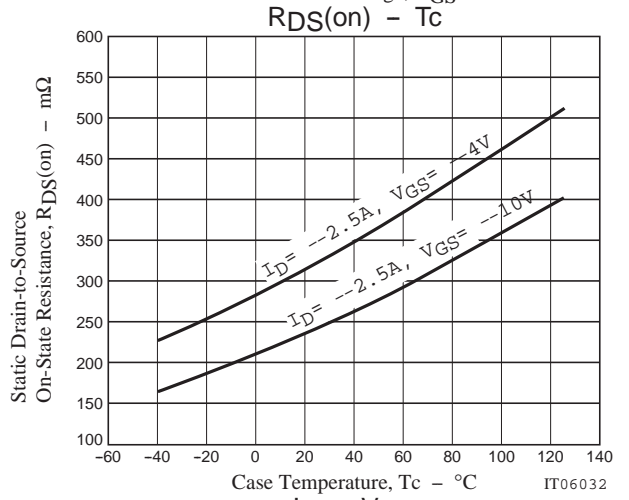
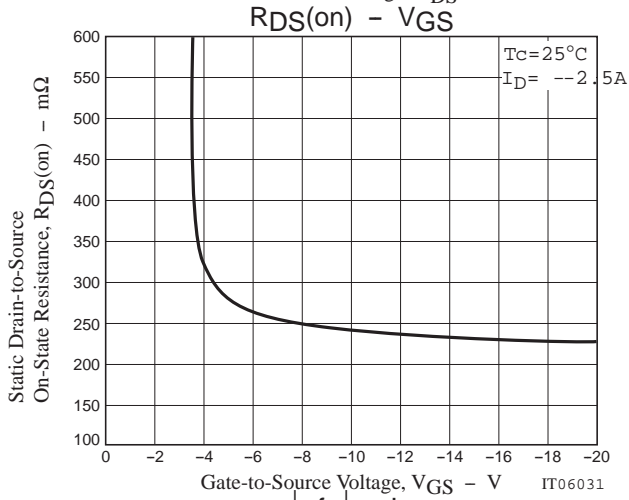
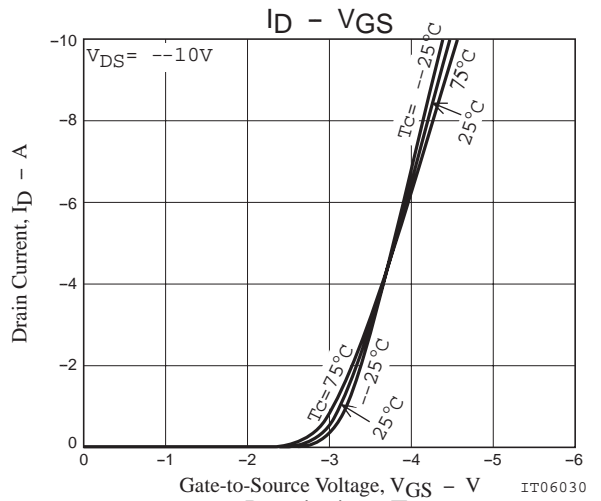
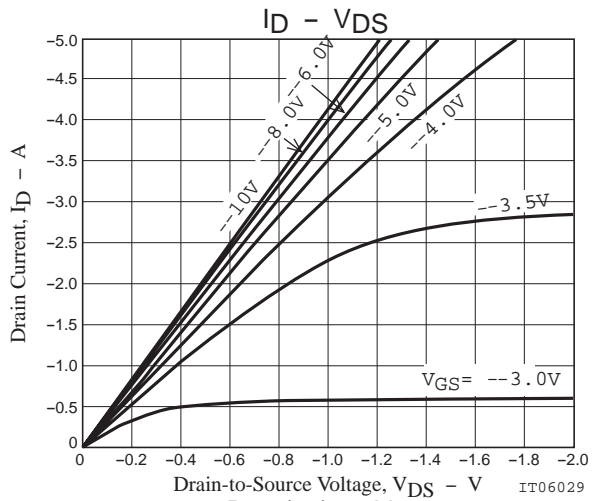
| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|------------------|------------------------|-------------|------|
| Drain-to-Source Voltage | V _{DSS} | | -100 | V |
| Gate-to-Source Voltage | V _{GSS} | | ±20 | V |
| Drain Current (DC) | I _D | | -5 | A |
| Drain Current (Pulse) | I _{DP} | PW≤10μs, duty cycle≤1% | -20 | A |
| Allowable Power Dissipation | P _D | | 1 | W |
| | | T _c =25°C | 20 | W |
| Channel Temperature | T _{ch} | | 150 | °C |
| Storage Temperature | T _{stg} | | -55 to +150 | °C |

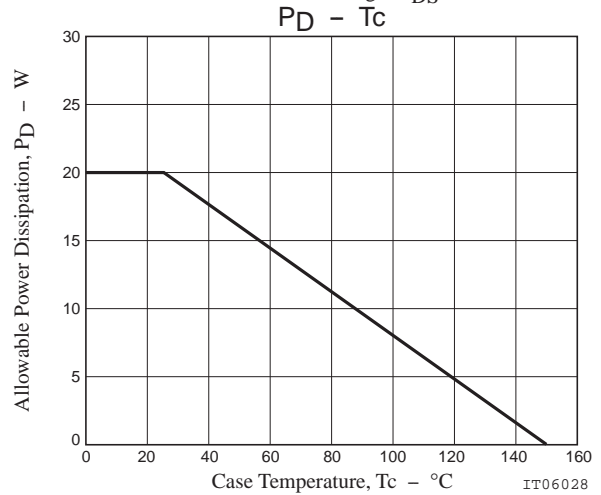
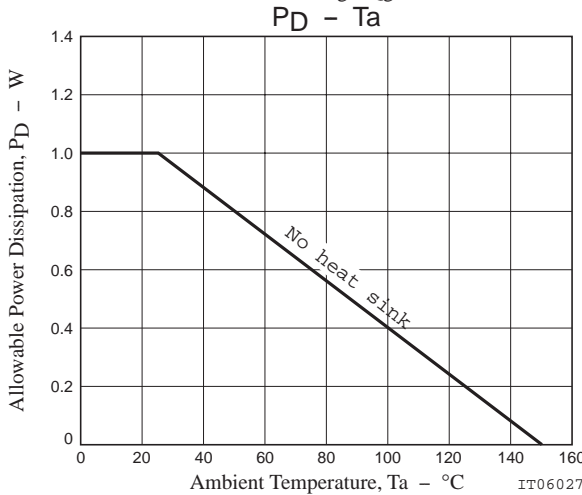
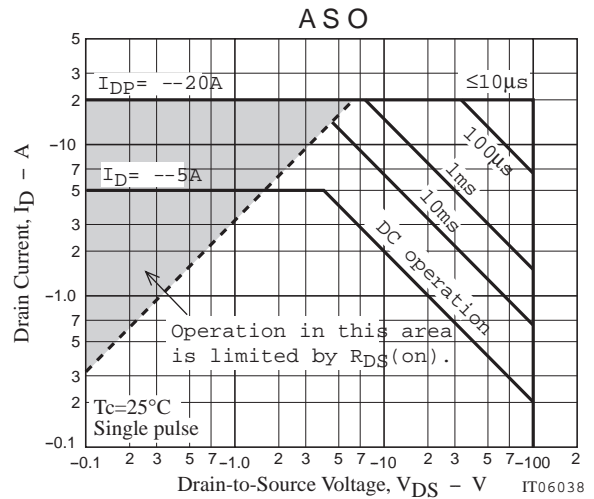
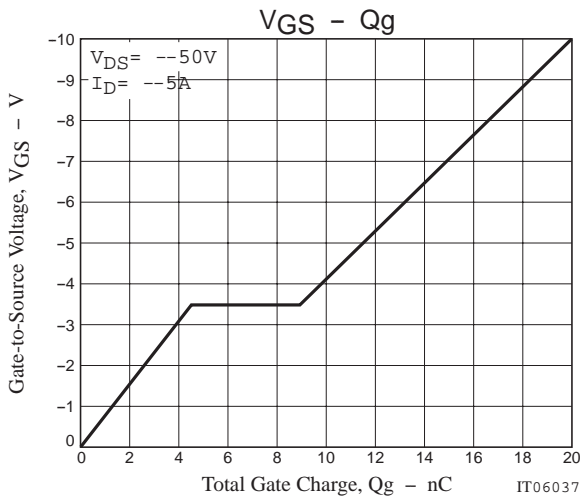
Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|----------------------|--|---------|-------|------|------|
| | | | min | typ | max | |
| Drain-to-Source Breakdown Voltage | V _{(BR)DSS} | I _D =-1mA, V _{GS} =0 | -100 | | | V |
| Zero-Gate Voltage Drain Current | I _{DSS} | V _{DSS} =-100V, V _{GS} =0 | | | -1 | μA |
| Gate-to-Source Leakage Current | I _{GSS} | V _{GS} =±16V, V _{DSS} =0 | | | ±10 | μA |
| Cutoff Voltage | V _{GS(off)} | V _{DSS} =-10V, I _D =-1mA | -1.2 | | -2.6 | V |
| Forward Transfer Admittance | y _{fs} | V _{DSS} =-10V, I _D =-2.5A | 3 | 5 | | S |
| Static Drain-to-Source On-State Resistance | R _{DS(on)1} | I _D =-2.5A, V _{GS} =-10V | | 240 | 312 | mΩ |
| | R _{DS(on)2} | I _D =-2.5A, V _{GS} =-4V | | 320 | 450 | mΩ |
| Input Capacitance | C _{iss} | V _{DSS} =-20V, f=1MHz | | 935 | | pF |
| Output Capacitance | C _{oss} | V _{DSS} =-20V, f=1MHz | | 71 | | pF |
| Reverse Transfer Capacitance | C _{rss} | V _{DSS} =-20V, f=1MHz | | 48 | | pF |
| Turn-ON Delay Time | t _{d(on)} | See specified Test Circuit. | | 12 | | ns |
| Rise Time | t _r | See specified Test Circuit. | | 70 | | ns |
| Turn-OFF Delay Time | t _{d(off)} | See specified Test Circuit. | | 80 | | ns |
| Fall Time | t _f | See specified Test Circuit. | | 52 | | ns |
| Total Gate Charge | Q _g | V _{DSS} =-50V, V _{GS} =-10V, I _D =-5A | | 20 | | nC |
| Gate-to-Source Charge | Q _{gs} | V _{DSS} =-50V, V _{GS} =-10V, I _D =-5A | | 4.5 | | nC |
| Gate-to-Drain "Miller" Charge | Q _{gd} | V _{DSS} =-50V, V _{GS} =-10V, I _D =-5A | | 4.5 | | nC |
| Diode Forward Voltage | V _{SD} | I _S =-5A, V _{GS} =0 | | -0.89 | -1.2 | V |

Switching Time Test Circuit







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