



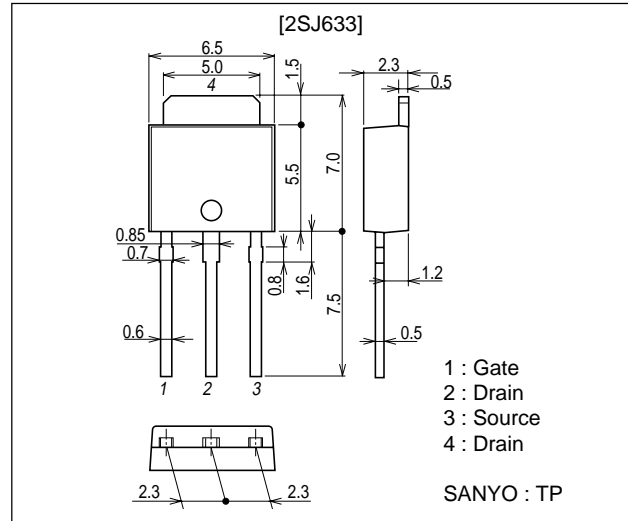
**DC / DC Converter Applications**

**Features**

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

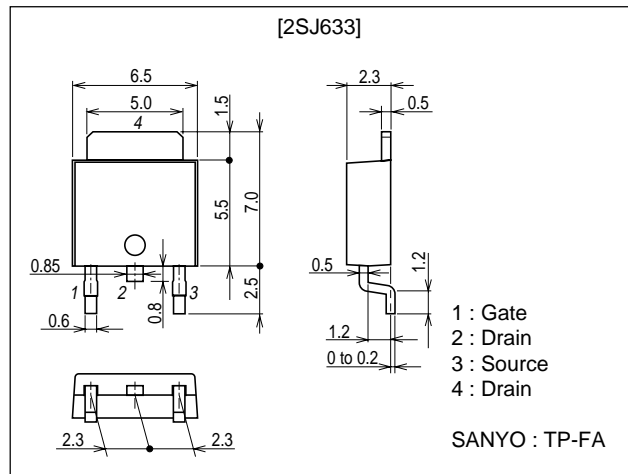
**Package Dimensions**

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.

## 2SJ633

### Specifications

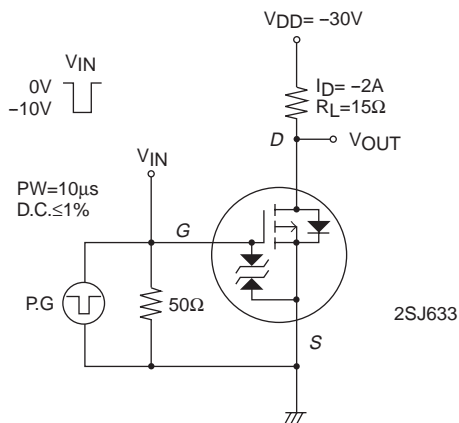
#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-60	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-4	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-16	A
Allowable Power Dissipation	P <sub>D</sub>		1	W
		Tc=25°C	15	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

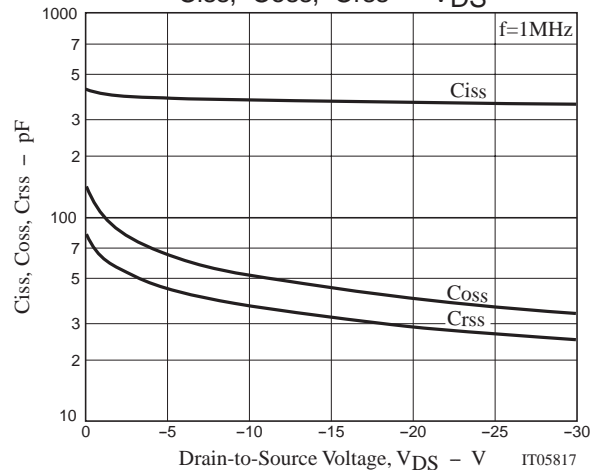
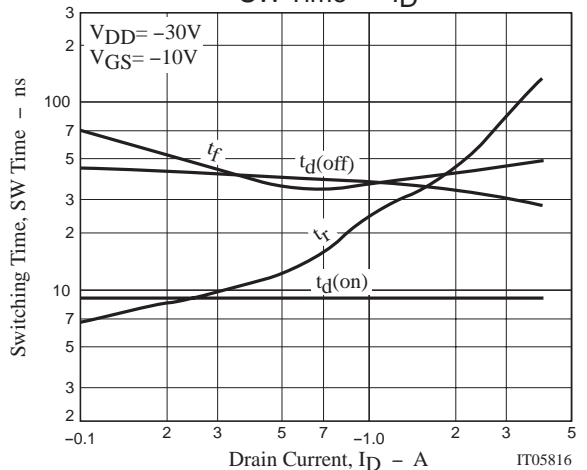
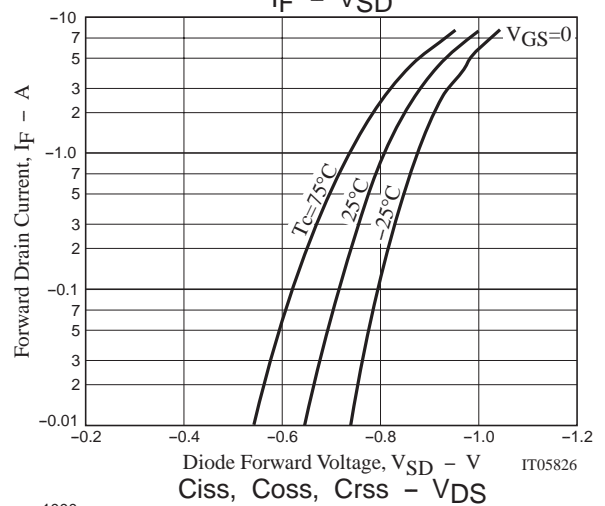
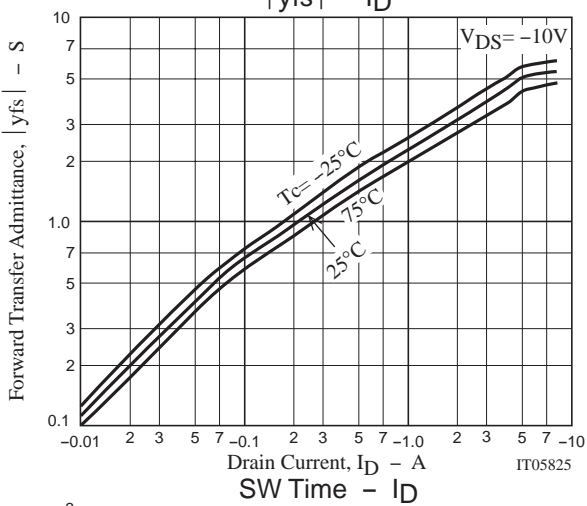
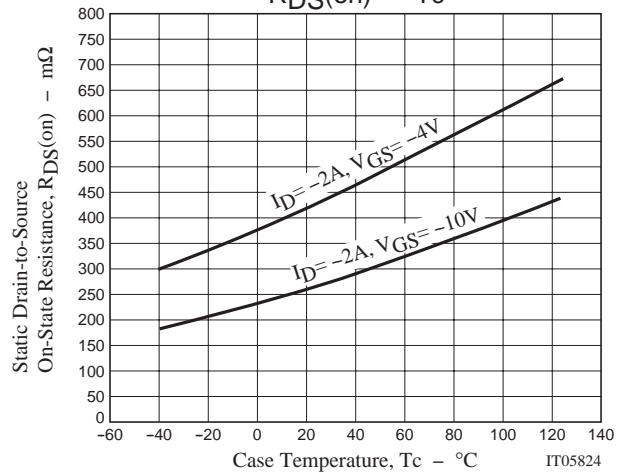
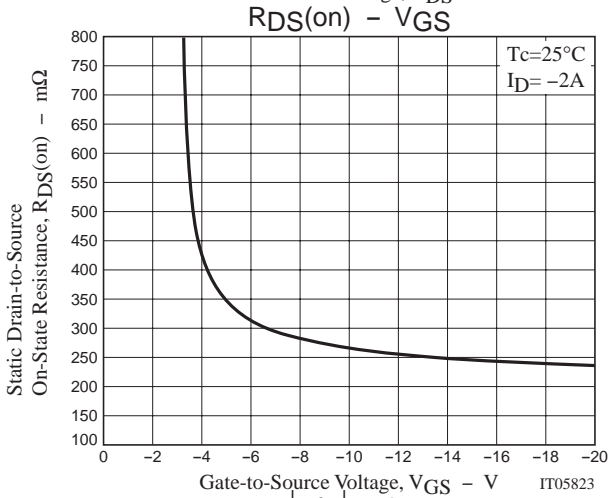
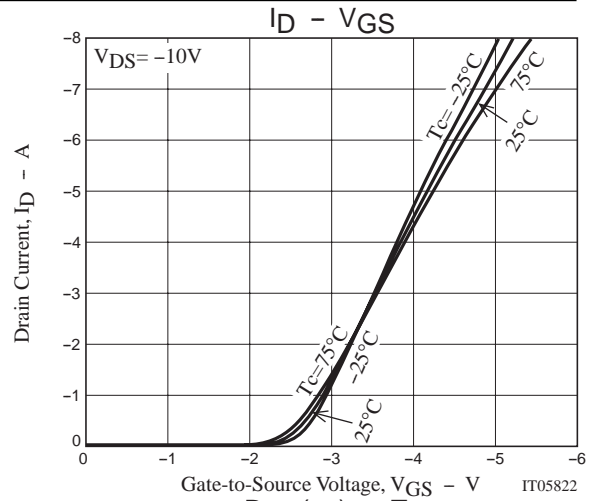
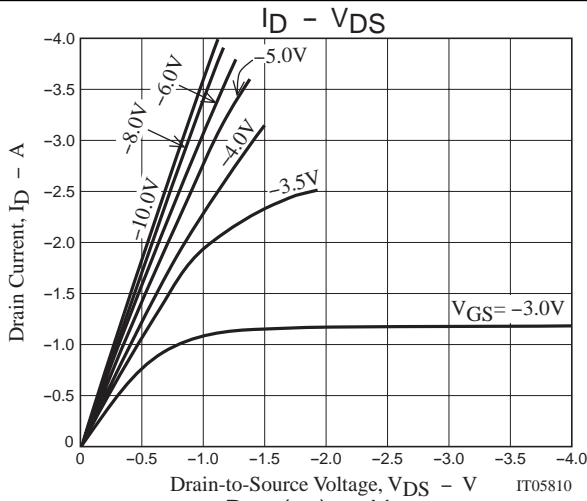
#### Electrical Characteristics at Ta=25°C

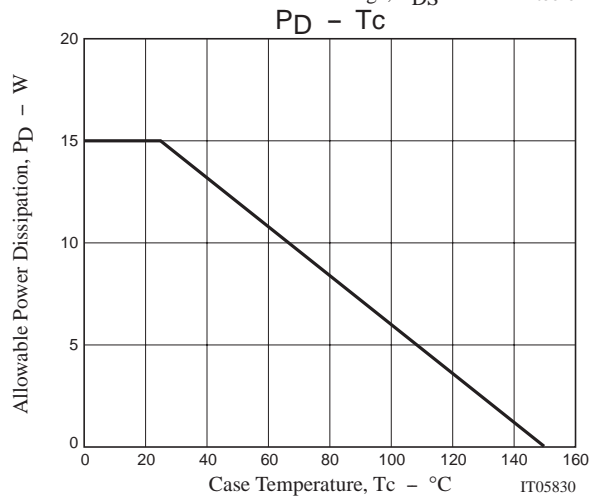
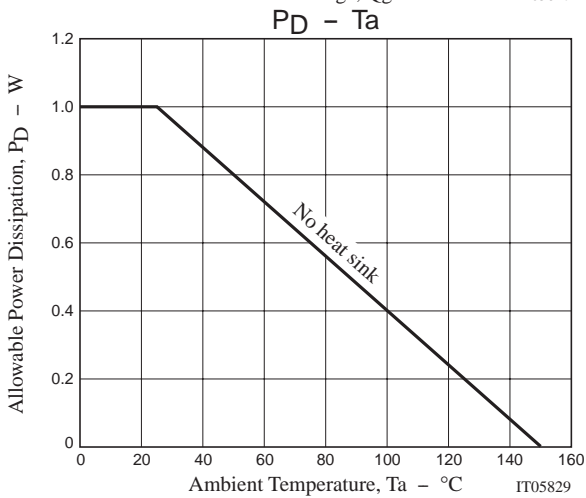
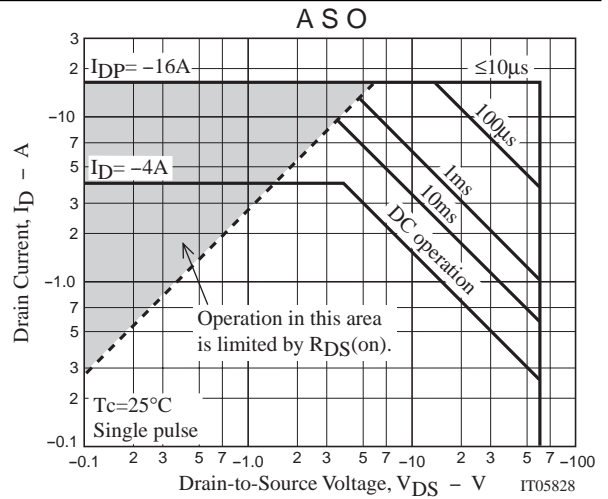
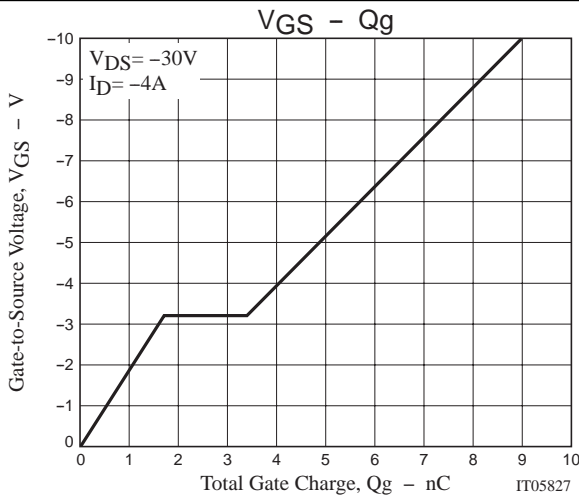
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> =-1mA, V <sub>GS</sub> =0	-60			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-60V, V <sub>GS</sub> =0			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±16V, V <sub>DS</sub> =0			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-2A	1.5	3		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-2A, V <sub>GS</sub> =-10V		280	365	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-2A, V <sub>GS</sub> =-4V		405	565	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-20V, f=1MHz		365		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =-20V, f=1MHz		39		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =-20V, f=1MHz		30		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		9		ns
Rise Time	t <sub>r</sub>	See specified Test Circuit.		45		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>	See specified Test Circuit.		33		ns
Fall Time	t <sub>f</sub>	See specified Test Circuit.		41		ns
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-4A		9		nC
Gate-to-Source Charge	Q <sub>gs</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-4A		1.7		nC
Gate-to-Drain "Miller" Charge	Q <sub>gd</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-4A		1.7		nC
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-4A, V <sub>GS</sub> =0	-0.9	-1.2		V

#### Switching Time Test Circuit



# 2SJ633





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