

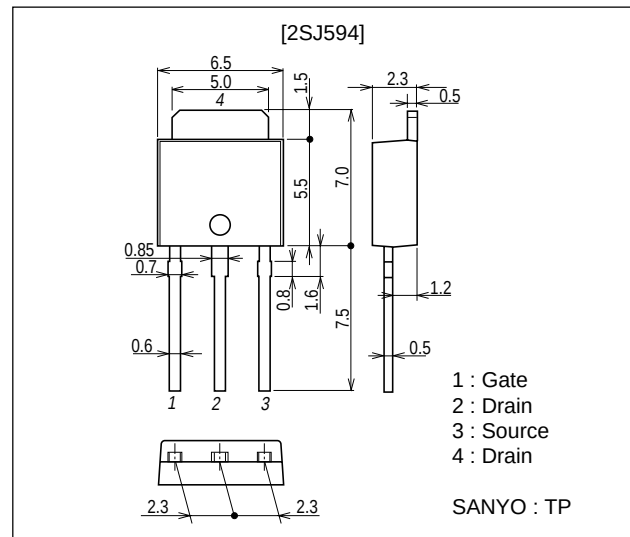
**2SJ594****DC / DC Converter Applications****Features**

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

Package Dimensions

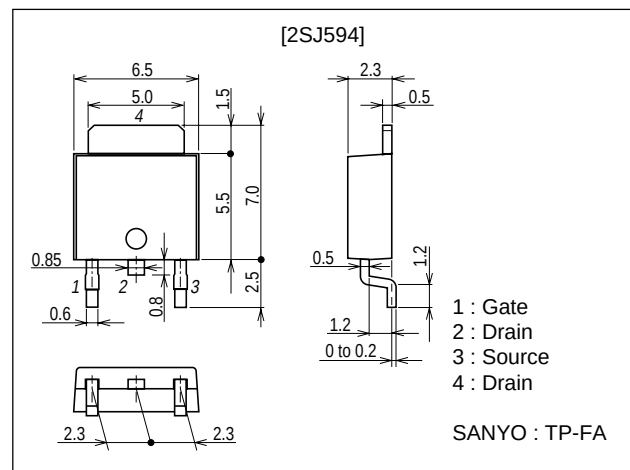
unit : mm

2083B



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.
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Specifications

Absolute Maximum Ratings at Ta=25°C

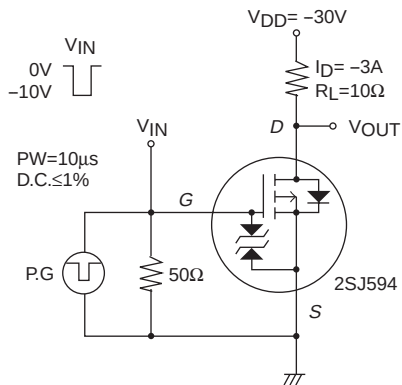
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-60	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-20	A
Allowable Power Dissipation	P _D		1	W
		Tc=25°C	15	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

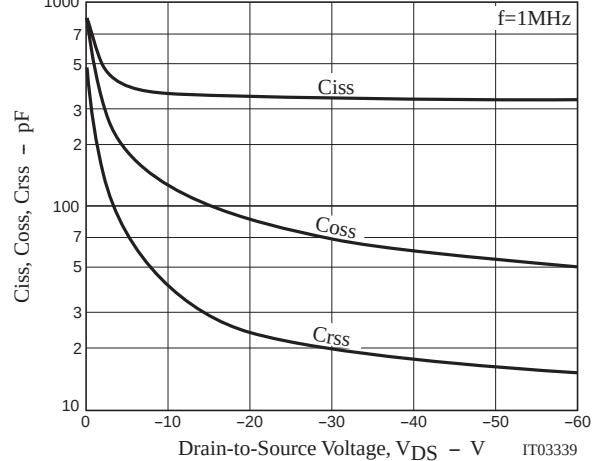
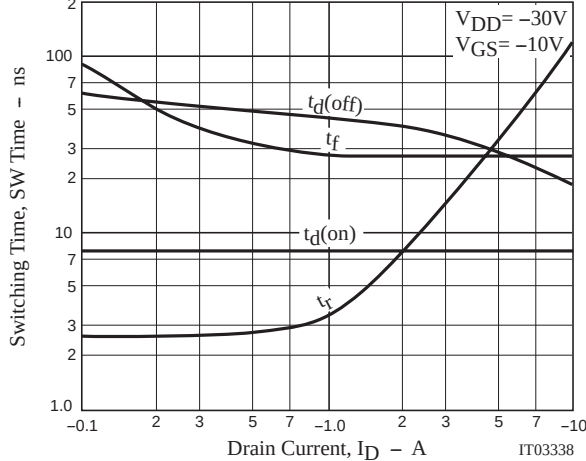
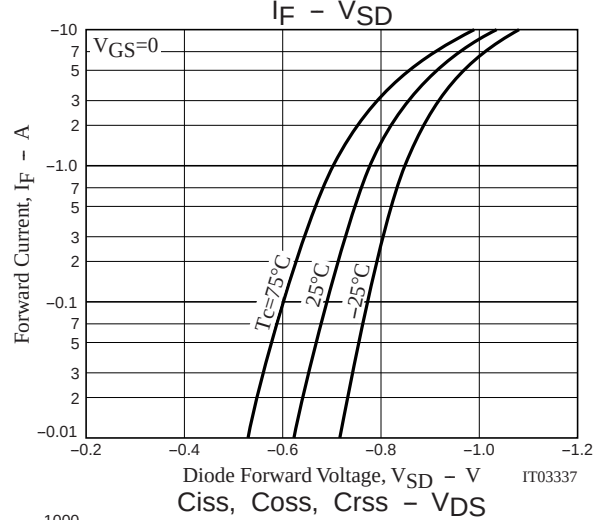
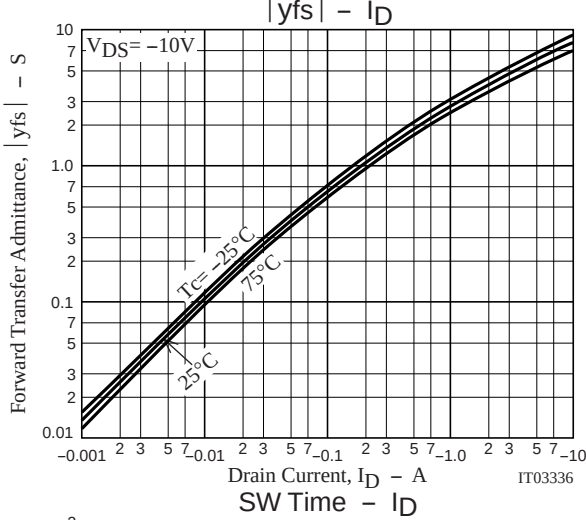
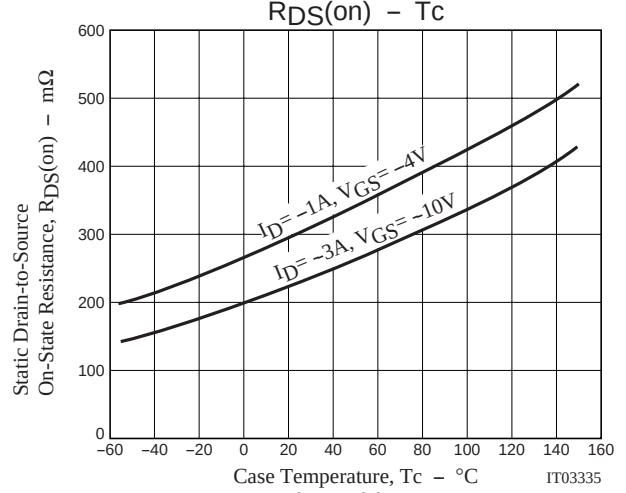
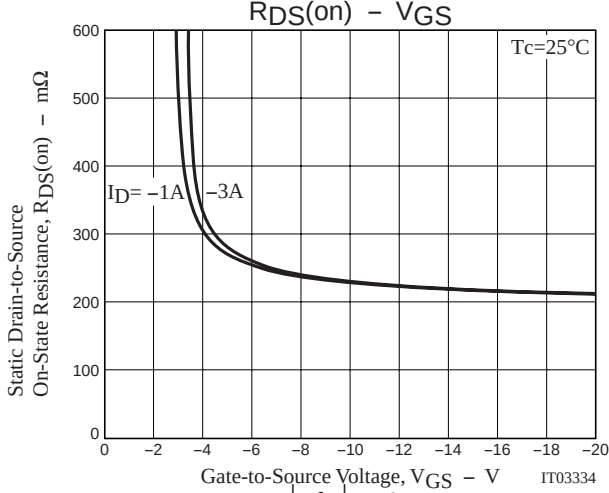
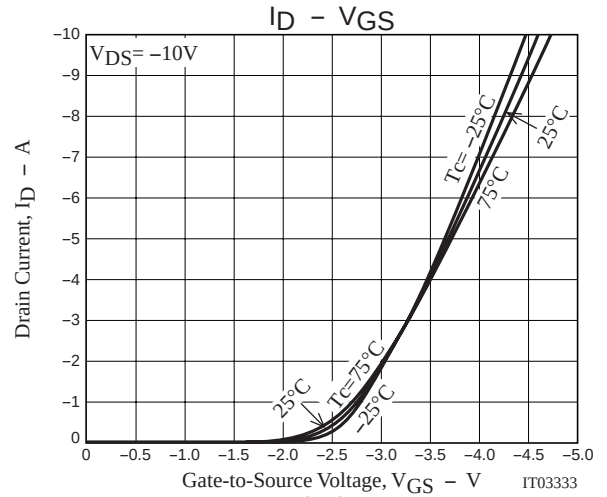
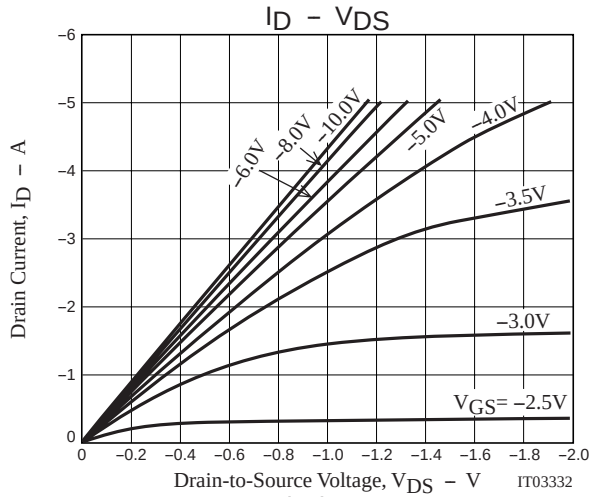
Electrical Characteristics at Ta=25°C

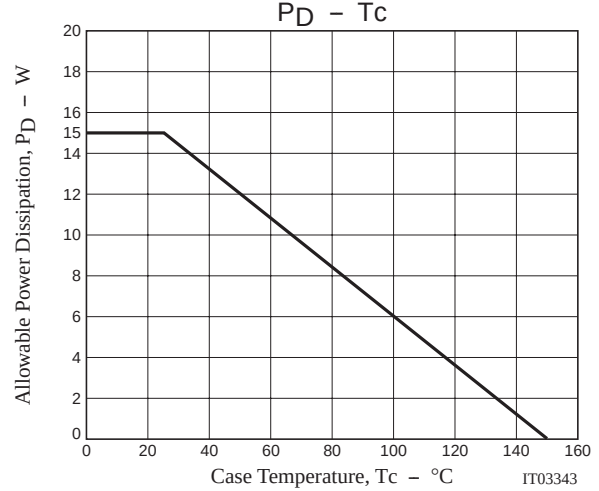
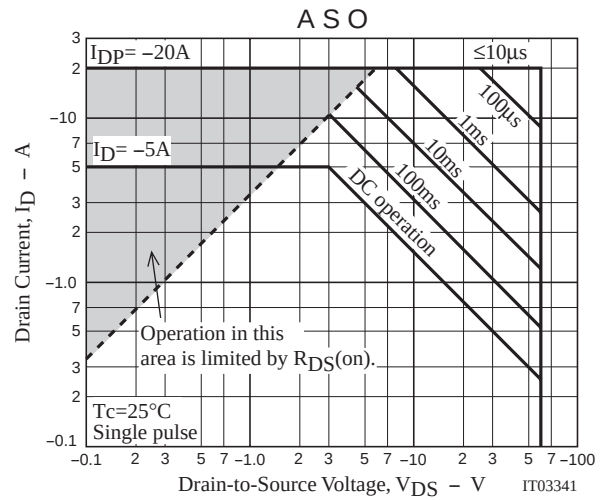
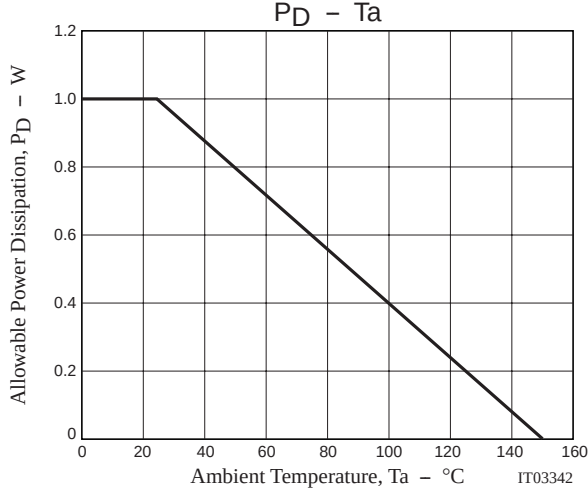
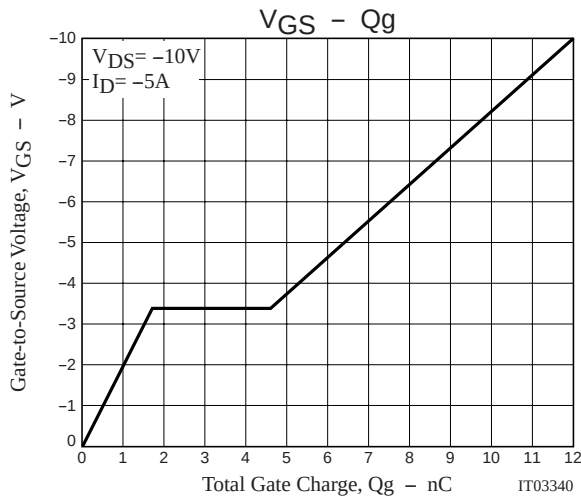
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =-1mA, V _{GS} =0	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0			-10	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.0		-2.4	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-3A	3.2	4.5		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-3A, V _{GS} =-10V		225	295	mΩ
	R _{DS(on)2}	I _D =-1A, V _{GS} =-4V		305	425	mΩ
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		350		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		90		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		25		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		8		ns
Rise Time	t _r	See specified Test Circuit		15		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		37		ns
Fall Time	t _f	See specified Test Circuit		28		ns
Total Gate Charge	Q _g	V _{DS} =-10V, V _{GS} =-10V, I _D =-5A		12		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-10V, V _{GS} =-10V, I _D =-5A		1.7		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =-10V, V _{GS} =-10V, I _D =-5A		2.9		nC
Diode Forward Voltage	V _{SD}	I _S =-5A, V _{GS} =0		-0.9	-1.2	V

Marking : J594

Switching Time Test Circuit







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