



2SK2791

Ultrahigh-Speed Switching Applications

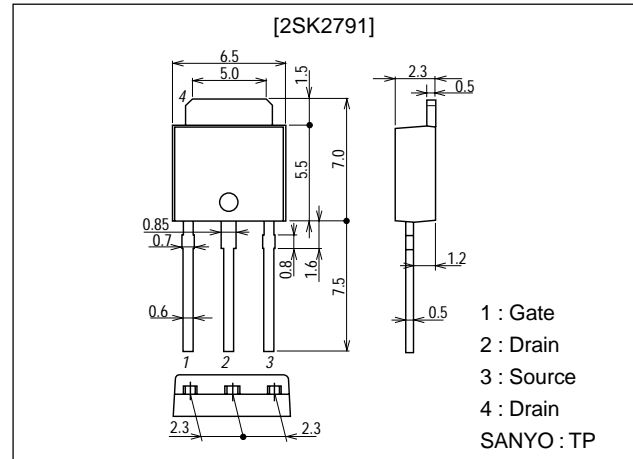
Features

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

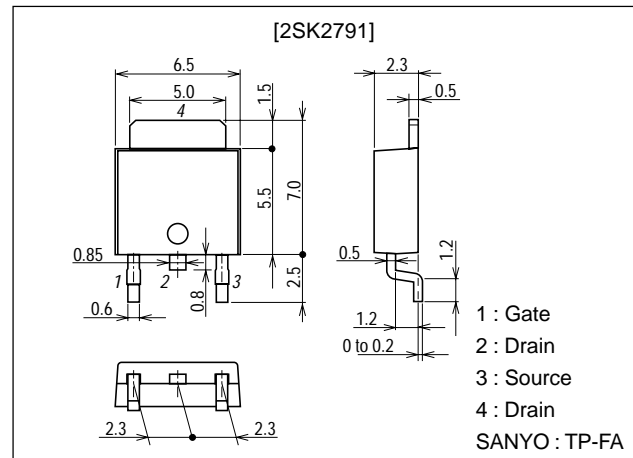
Package Dimensions

unit:mm

2083B



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

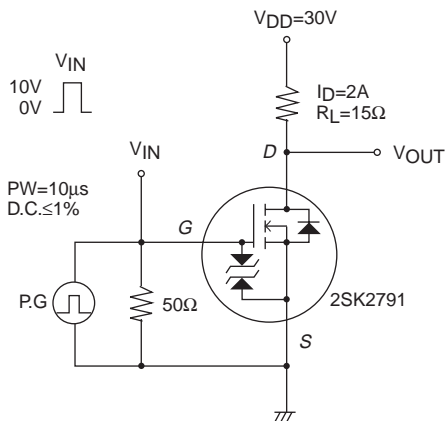
Absolute Maximum Ratings at Ta = 25°C

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		4	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	16	A
Allowable Power Dissipation	P_D		1	W
		$T_c = 25^\circ C$	20	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

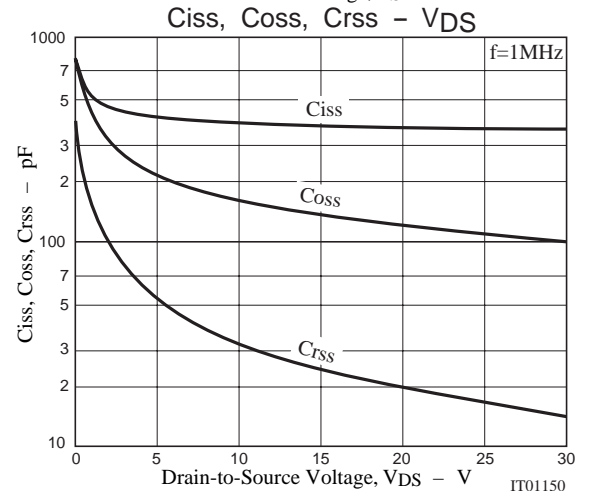
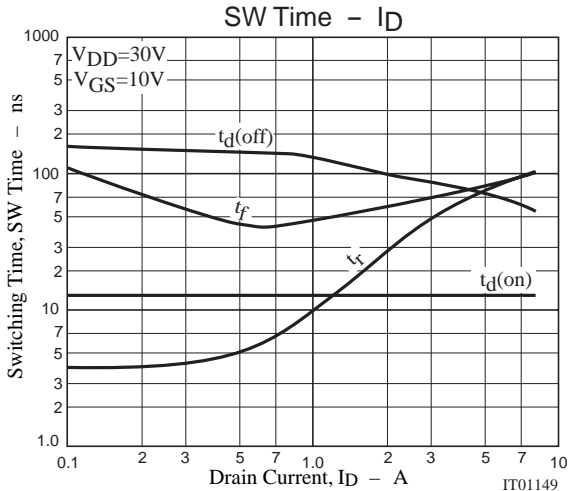
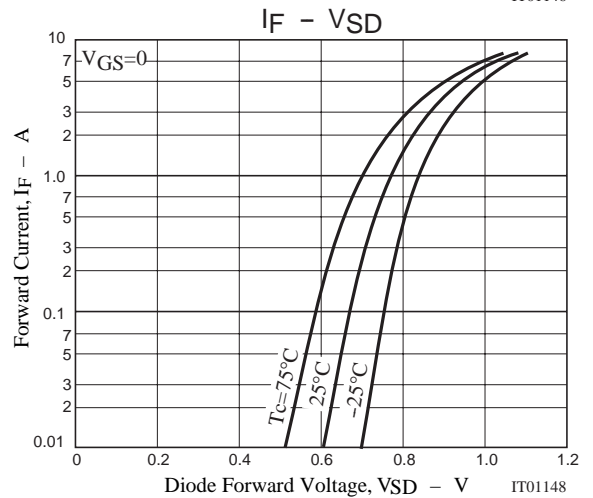
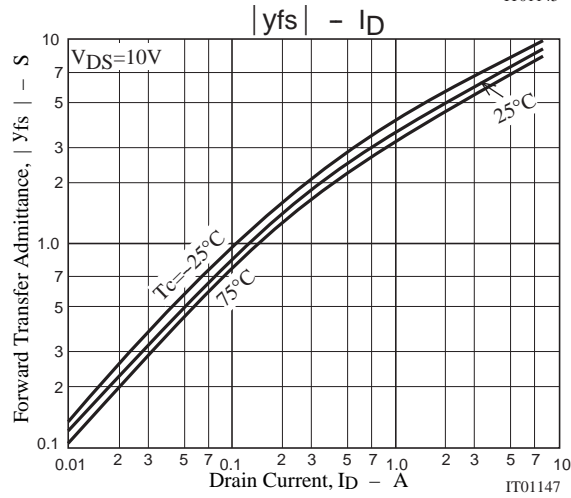
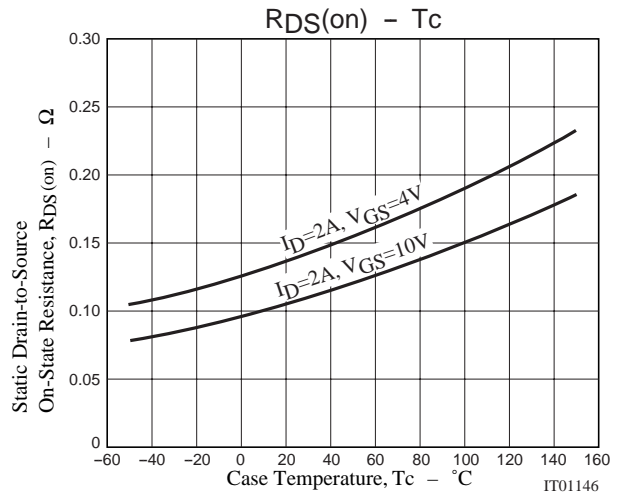
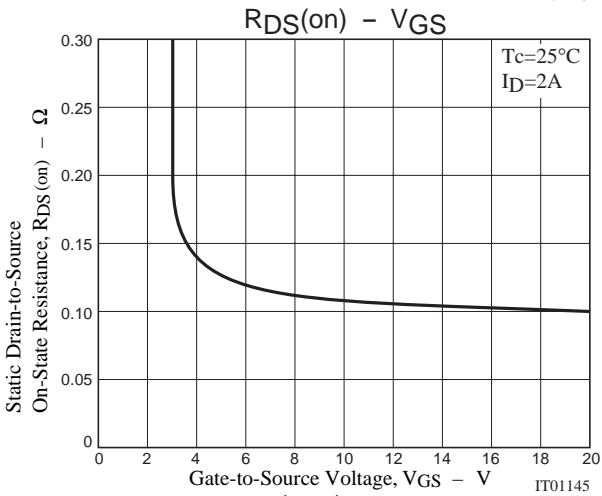
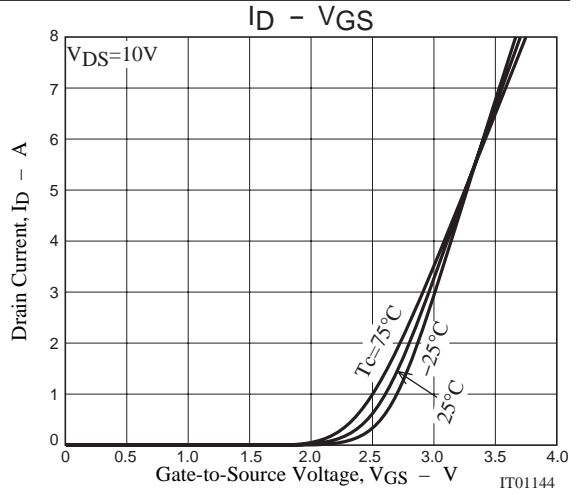
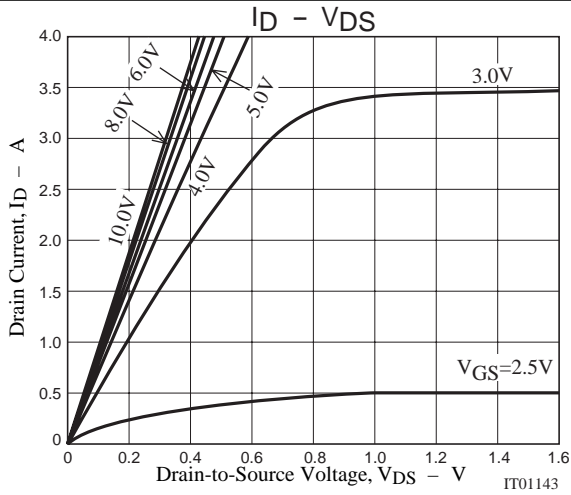
Electrical Characteristics at Ta = 25°C

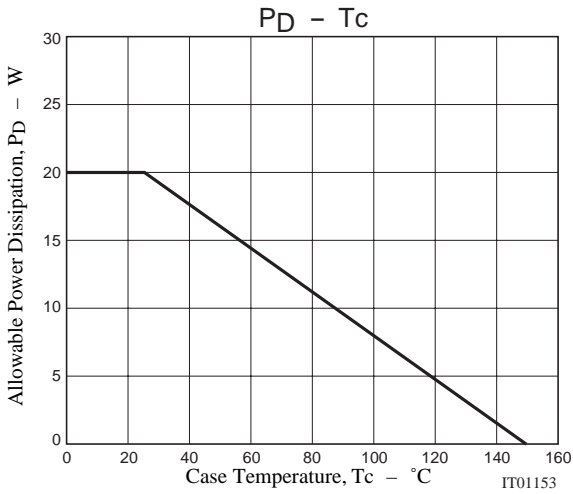
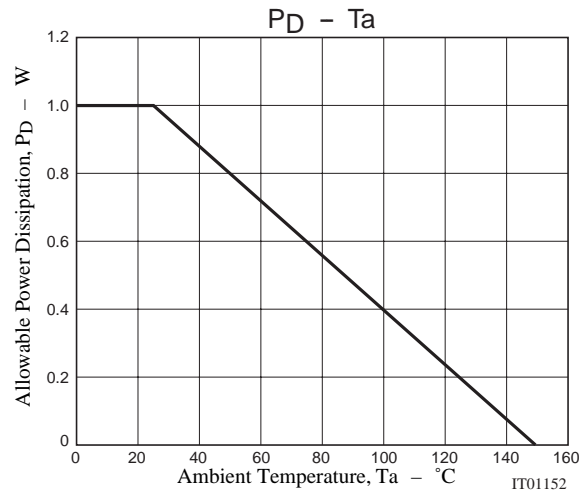
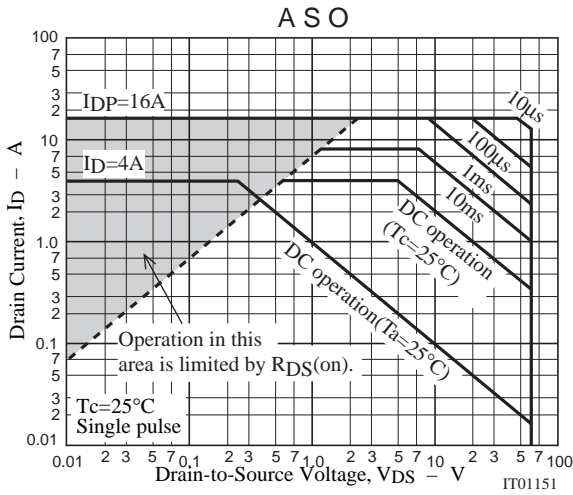
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA$, $V_{GS} = 0$	60			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60V$, $V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V$, $V_{DS} = 0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	1.0		2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10V$, $I_D = 2A$	3	5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$V_{GS} = 10A$, $I_D = 2A$		110	145	mΩ
	$R_{DS(on)2}$	$V_{GS} = 4A$, $I_D = 2A$		140	195	mΩ
Input Capacitance	C_{iss}	$V_{DS} = 20V$, $f = 1MHz$		370		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V$, $f = 1MHz$		120		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V$, $f = 1MHz$		20		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		13		ns
Rise Time	t_r	See specified Test Circuit		30		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		100		ns
Fall Time	t_f	See specified Test Circuit		60		ns
Diode Forward Voltage	V_{SD}	$I_S = 4A$, $V_{GS} = 0$		0.9	1.2	V

Switching Time Test Circuit



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