

**2SK3491**

Ultrahigh-Speed Switching Applications

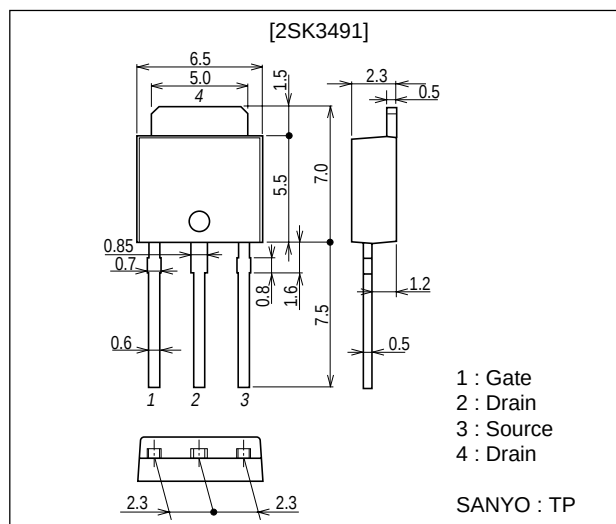
Features

- Low ON-resistance.
- Low Qg.

Package Dimensions

unit : mm

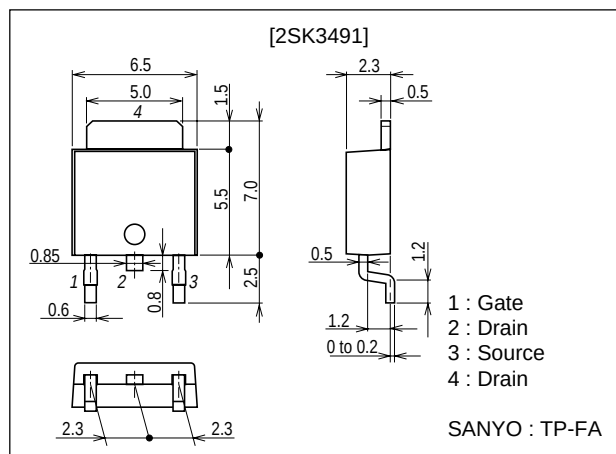
2083B



Package Dimensions

unit : mm

2092B



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52101 TS IM TA-3255 No.6959-1/4

Specifications

Absolute Maximum Ratings at Ta=25°C

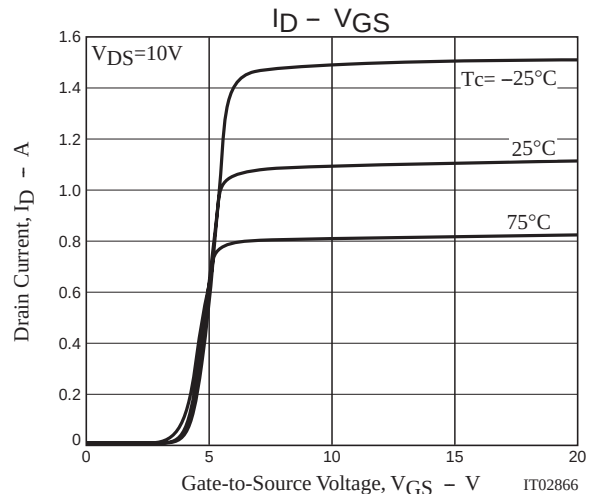
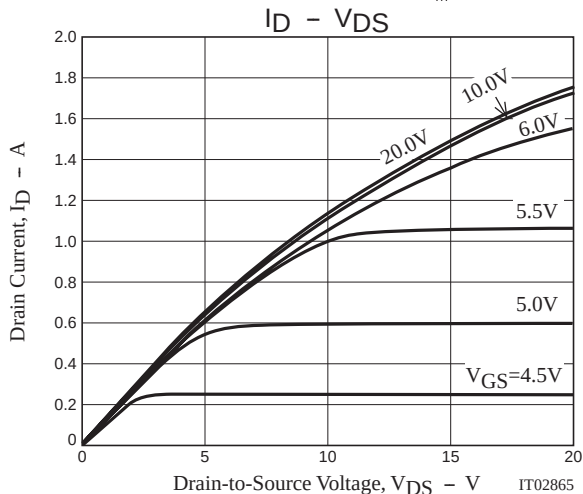
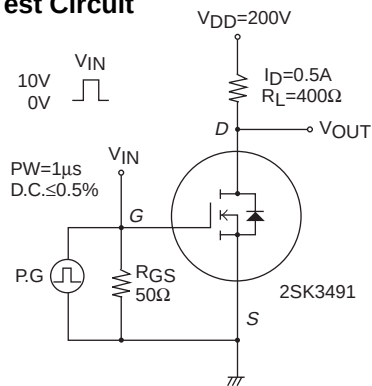
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		600	V
Gate-to-Source Voltage	V_{GS}		±30	V
Drain Current (DC)	I_D		1.0	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	4.0	A
Allowable Power Dissipation	P_D		1.0	W
		Tc=25°C	20	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

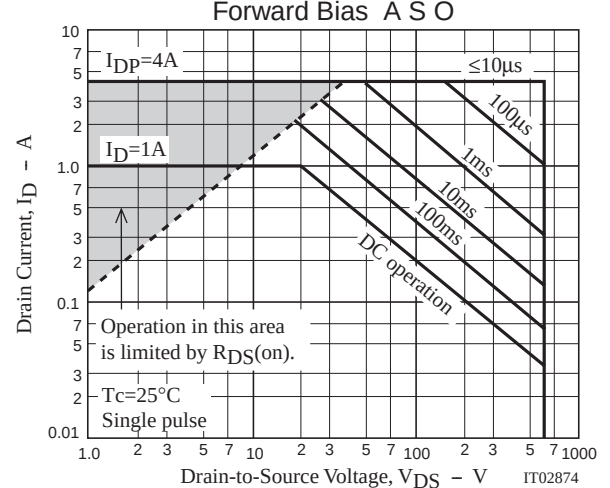
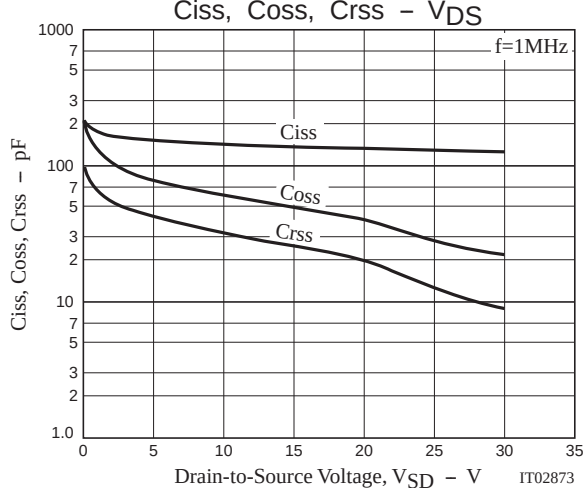
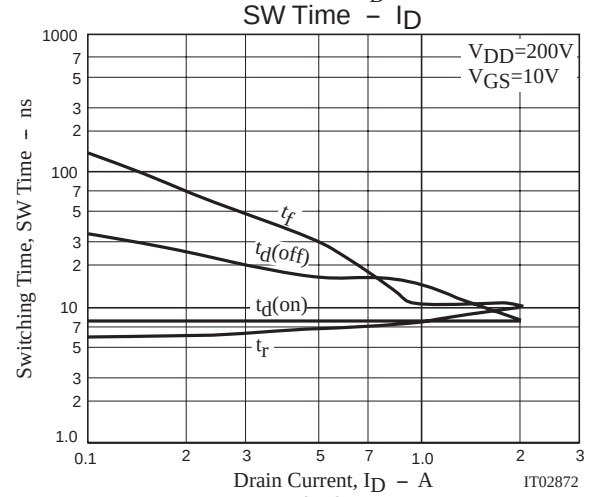
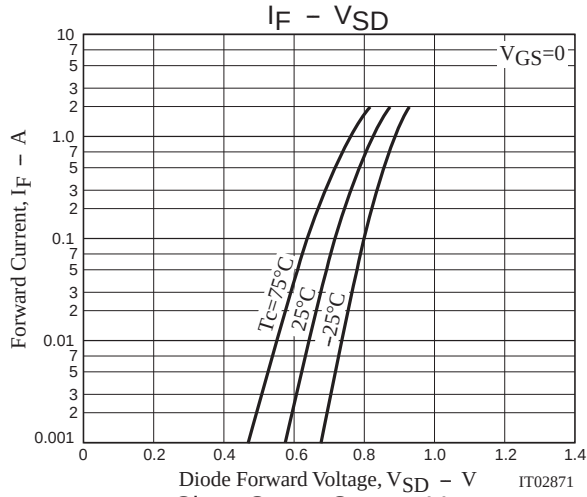
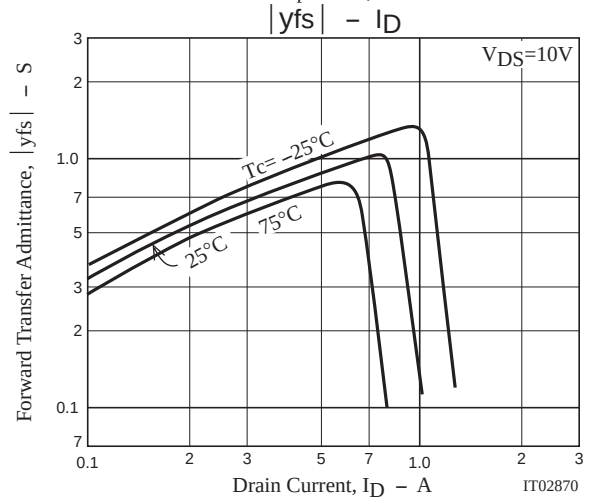
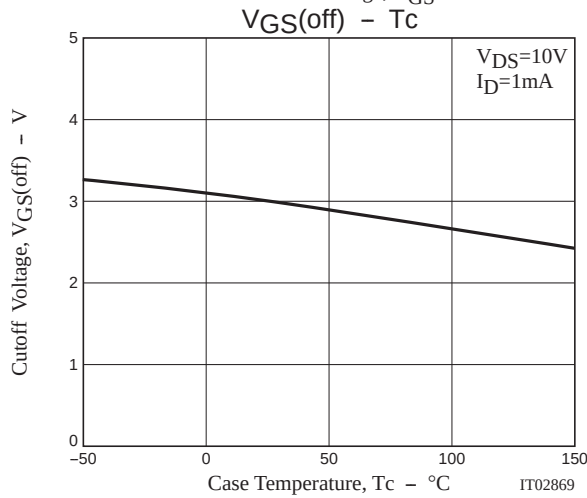
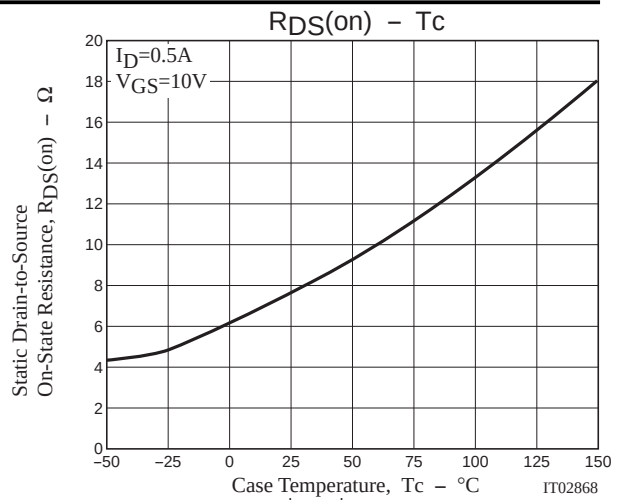
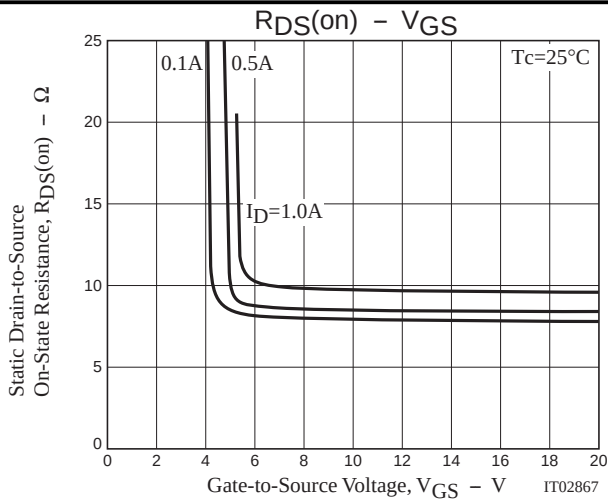
Electrical Characteristics at Ta=25°C

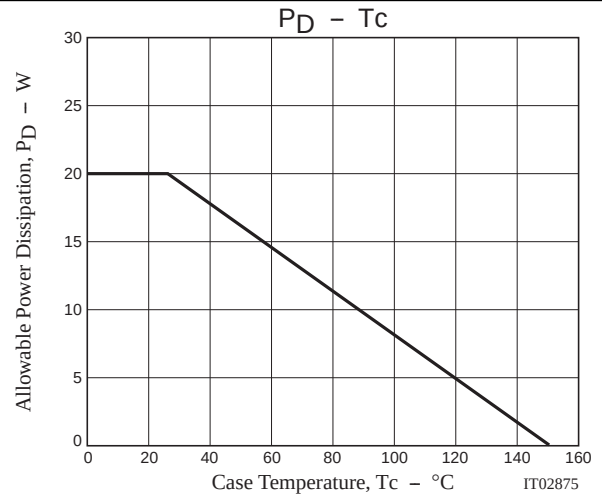
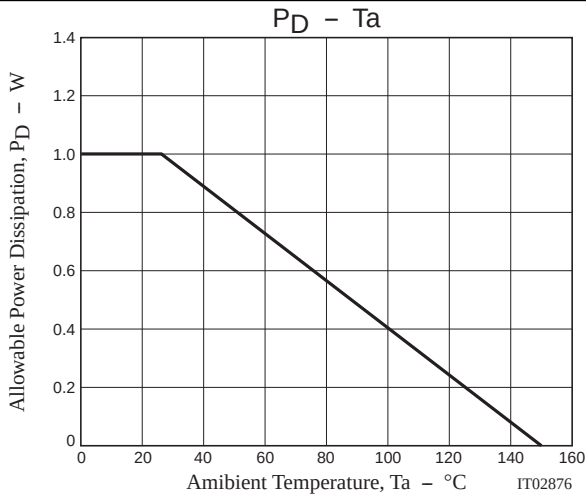
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0$	600			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=600V, V_{GS}=0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=±30V, V_{DS}=0$			±100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	2.5		3.5	V
Forward Transfer Admittance	yfs	$V_{DS}=10V, I_D=0.5A$	430	850		mS
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$V_{DS}=10V, I_D=0.5A$		8.5	11	Ω
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		135		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		40		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		20		pF
Total Gate Charge	Qg	$V_{DS}=200V, V_{GS}=10V, I_D=1.0A$		6		nC
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		8		ns
Rise Time	t_r	See specified Test Circuit		7		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		17		ns
Fall Time	t_f	See specified Test Circuit		30		ns
Diode Forward Voltage	V_{SD}	$I_S=1.0A, V_{GS}=0$		0.83	1.2	V

Marking : K3491

Switching Time Test Circuit







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