



2SJ382

Ultrahigh-Speed Switching Applications

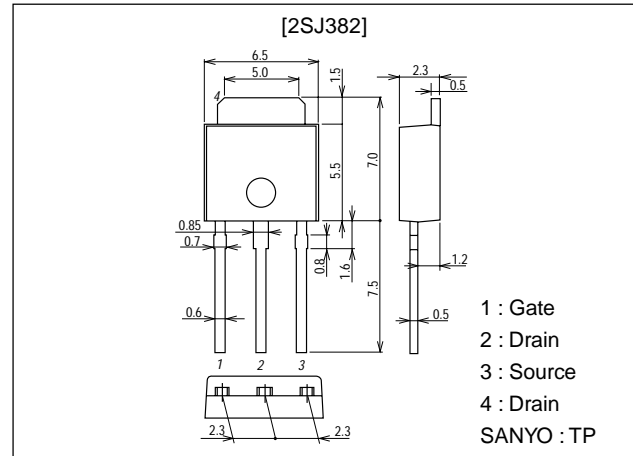
Features

- Low ON resistance.
- Ultrahigh-speed switching.
- 2.5V drive.

Package Dimensions

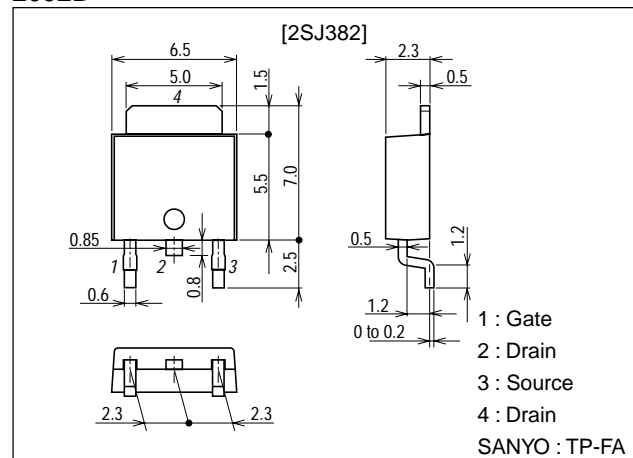
unit:mm

2083B



unit:mm

2092B



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Specifications

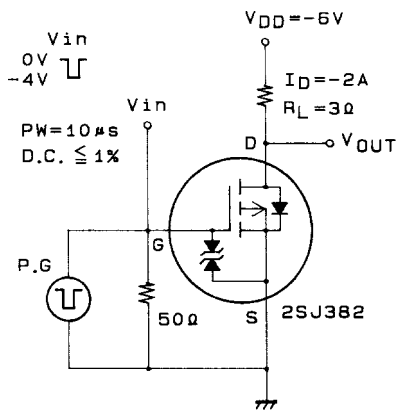
Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-12	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-4	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-16	A
Allowable Power Dissipation	P _D		1	W
		Tc=25°C	20	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

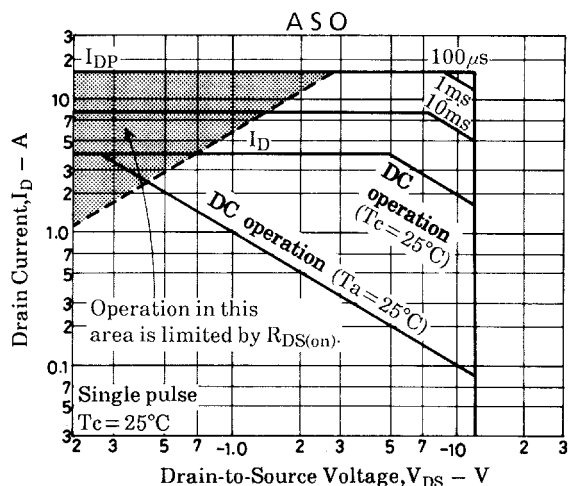
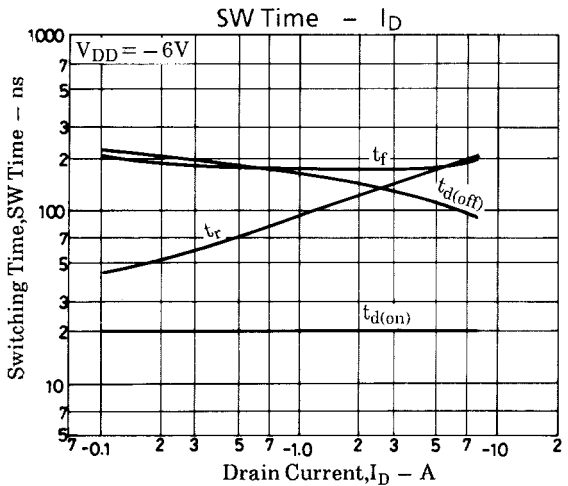
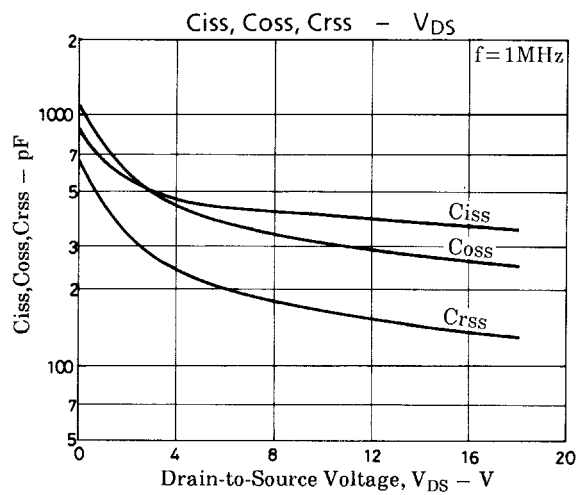
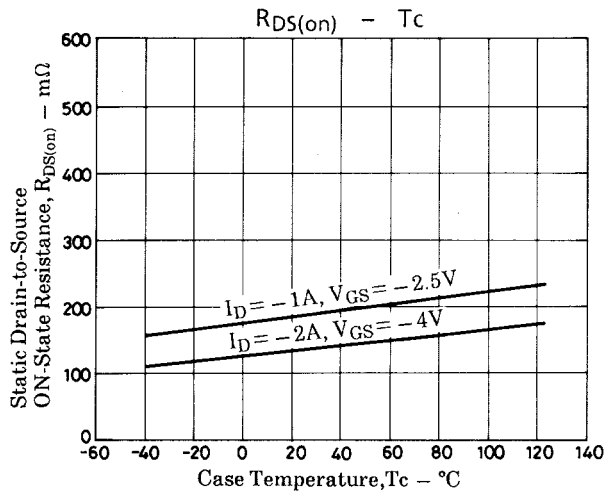
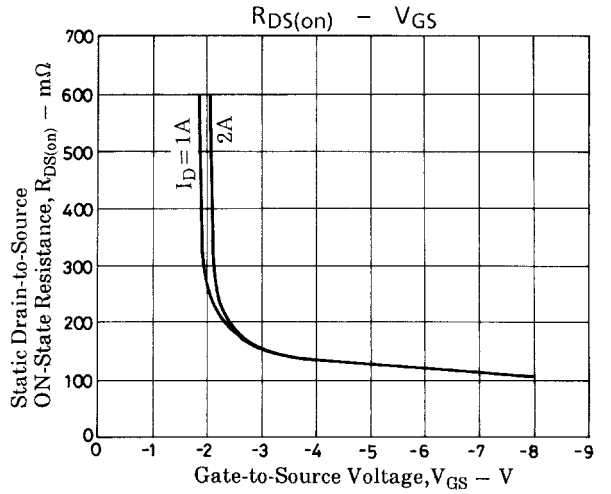
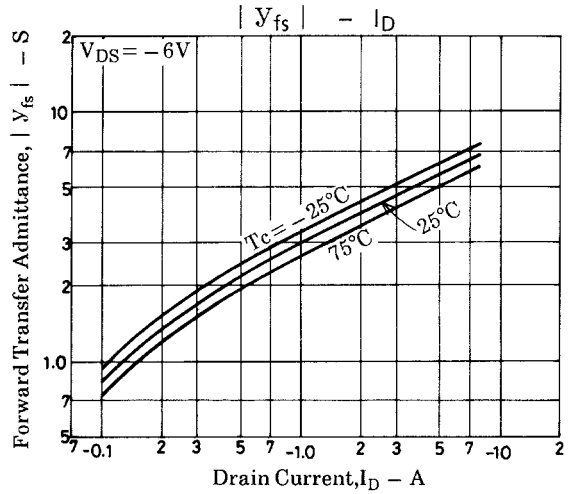
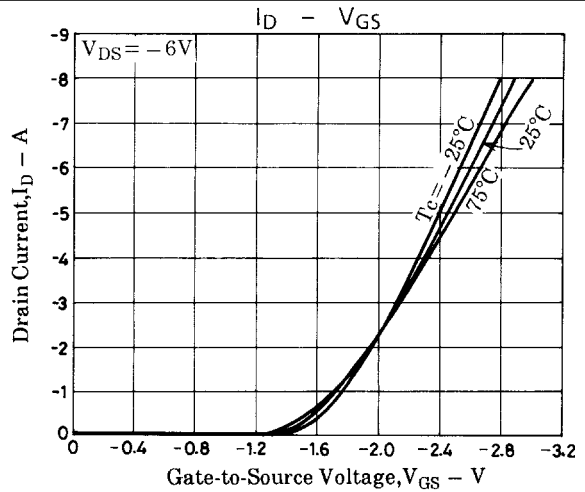
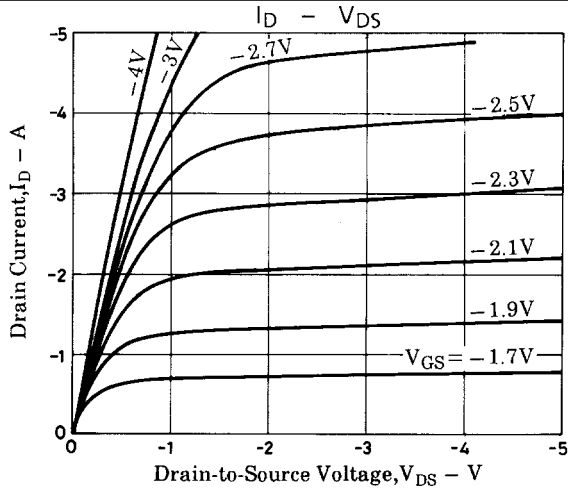
Electrical Characteristics at Ta = 25°C

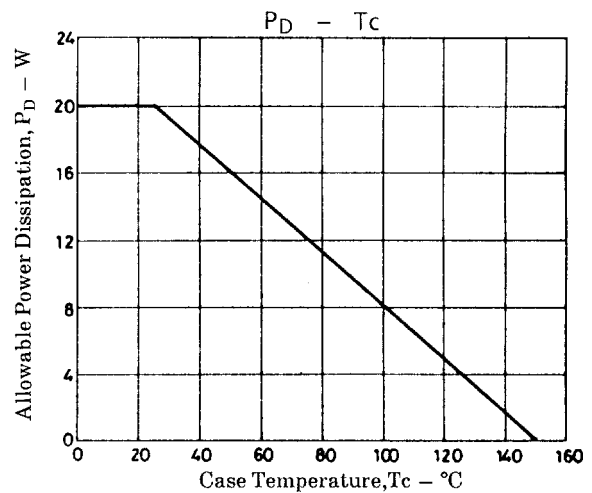
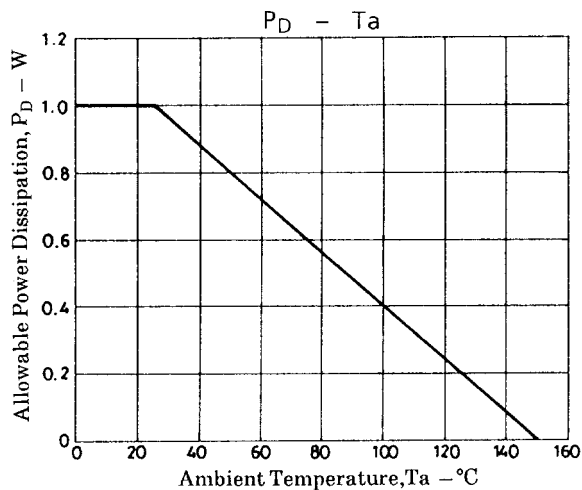
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =-1mA, V _{GS} =0	-12			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-10V, V _{GS} =0			-100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-6V, I _D =-1mA	-0.5		-1.5	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-6V, I _D =-2A	2.5	4		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D =-2A, V _{GS} =-4V		135	177	mΩ
	R _{DS(on)}	I _D =-1A, V _{GS} =-2.5V		185	300	mΩ
Input Capacitance	C _{iss}	V _{DS} =-6V, f=1MHz		400		pF
Output Capacitance	C _{oss}	V _{DS} =-6V, f=1MHz		370		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-6V, f=1MHz		160		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		20		ns
Rise Time	t _r	See specified Test Circuit		120		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		140		ns
Fall Time	t _f	See specified Test Circuit		180		ns
Diode Forward Voltage	V _{SD}	I _S =-4A, V _{GS} =0		-1.0	-1.2	V

Switching Time Test Circuit



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