



No.5251

2SK2406

N-Channel Silicon MOSFET

Ultrahigh-Speed Switching,
Motor Driver Applications

Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- High-speed diode.

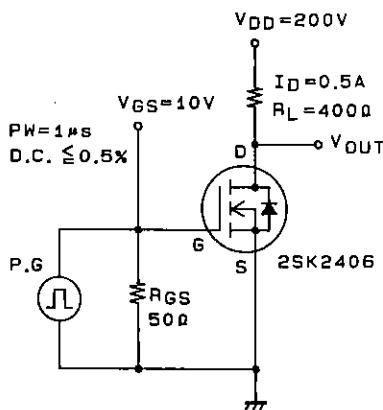
Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V _{DSS}	450	V
Gate-to-Source Voltage	V _{GSS}	±30	V
Drain Current(DC)	I _D	1	A
Drain Current(Pulse)	I _{DP}	PW ≤ 10μs, duty cycle ≤ 1%	4 A
Allowable Power Dissipation	P _D	T _c = 25°C	1 W
			30 W
Channel Temperature	T _{ch}		150 °C
Storage Temperature	T _{stg}		-55 to +150 °C

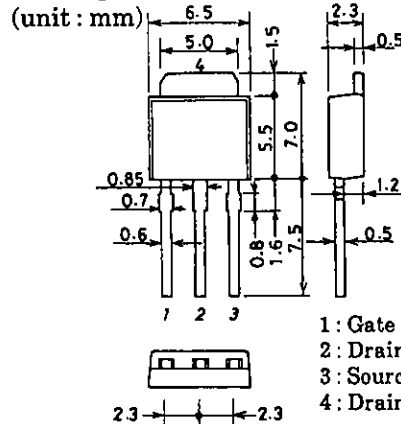
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
D-S Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0	450			V
Zero-Gate Voltage	I _{DSS}	V _{DS} = 450V, V _{GS} = 0			1	mA
Drain Current						
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	2.0		3.0	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10V, I _D = 0.5A	0.4	0.8		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D = 0.5A, V _{GS} = 10V		3.5	4.5	Ω
Input Capacitance	C _{iss}	V _{DS} = 20V, f = 1MHz		300		pF
Output Capacitance	C _{oss}	V _{DS} = 20V, f = 1MHz		40		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 20V, f = 1MHz		8		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		10		ns
Rise Time	t _r	"		9		ns
Turn-OFF Delay Time	t _{d(off)}	"		60		ns
Fall Time	t _f	"		50		ns
Diode Forward Voltage	V _{SD}	I _S = 1A, V _{GS} = 0	0.8	1.2		V
Diode Reverse Time	t _{rr}	I _S = 1A, di/dt = 100A/μs	80	120		ns

Switching Time Test Circuit

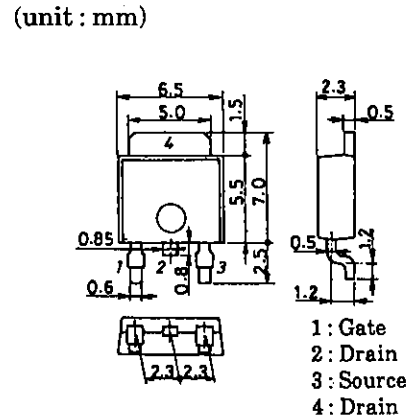


Package Dimensions 2083B



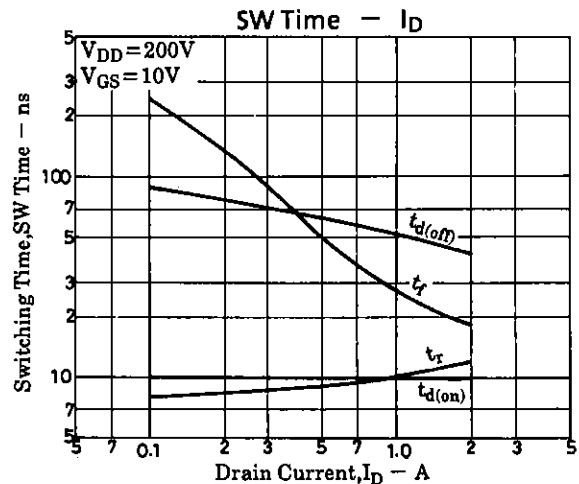
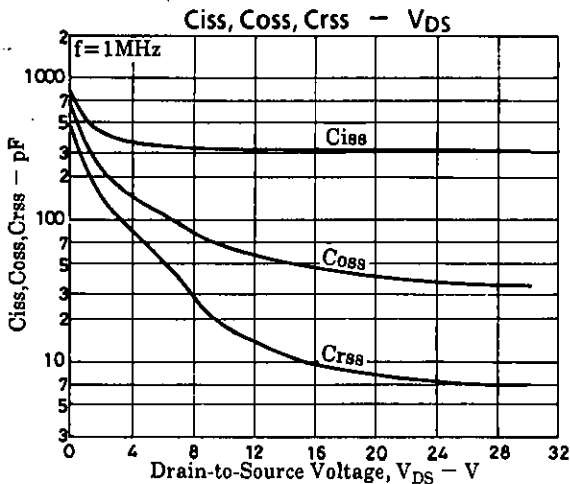
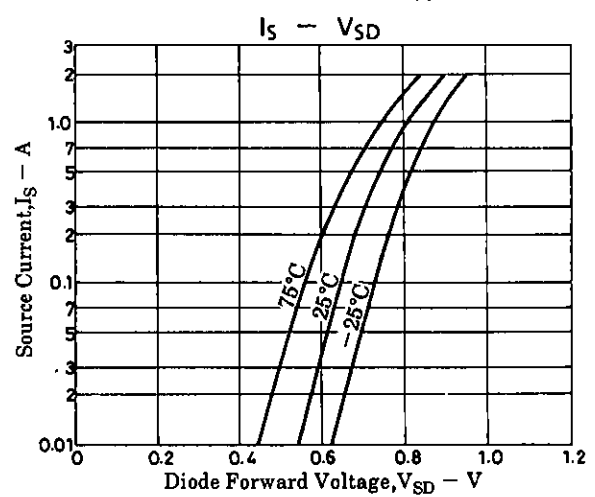
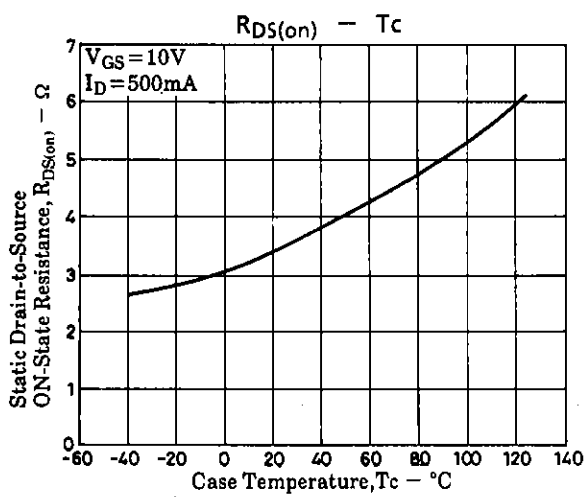
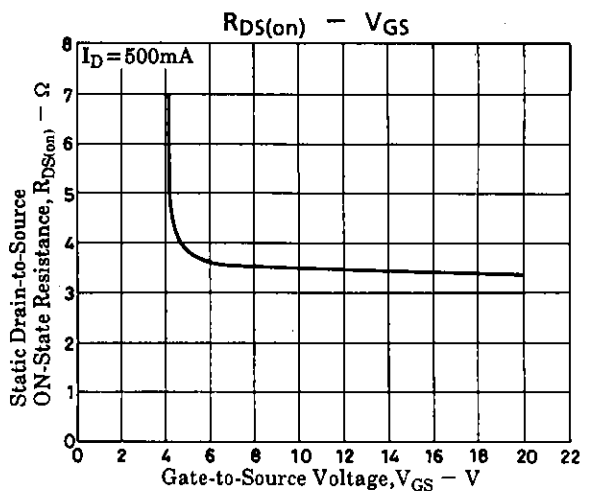
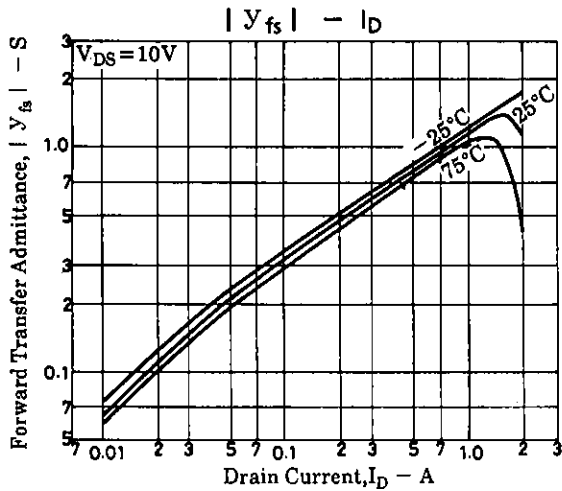
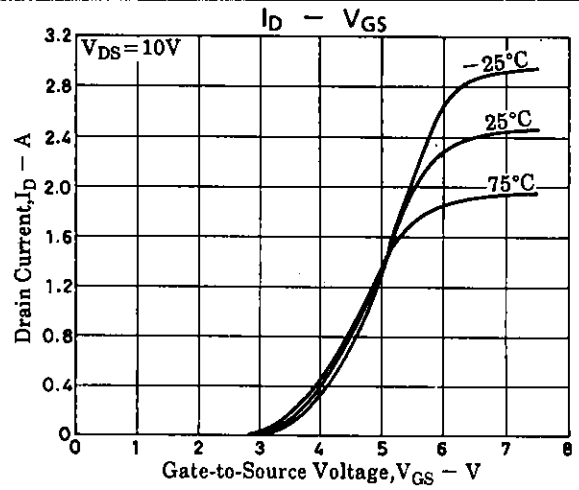
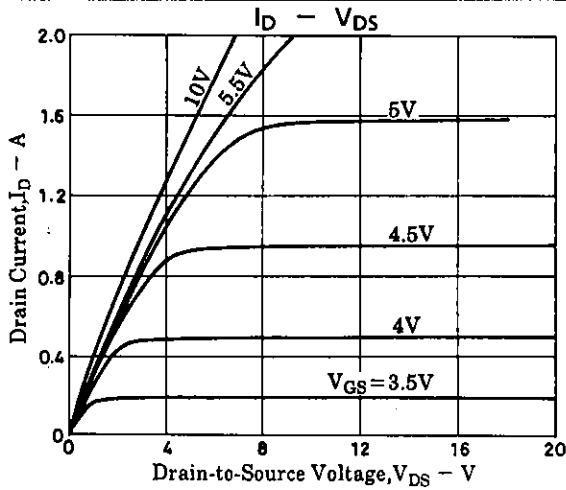
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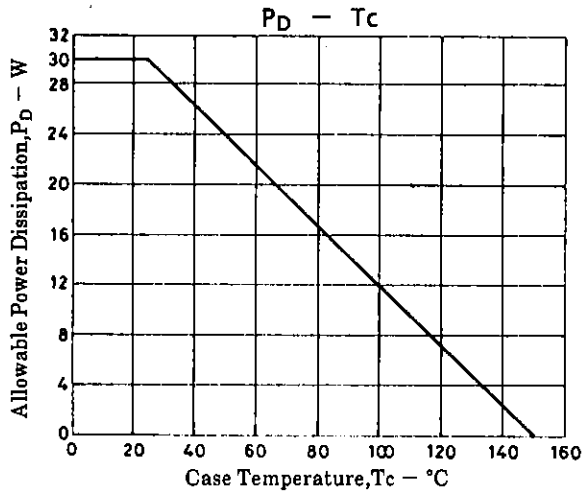
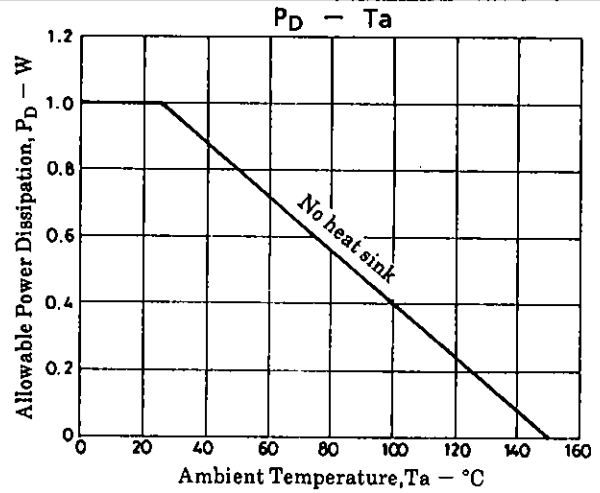
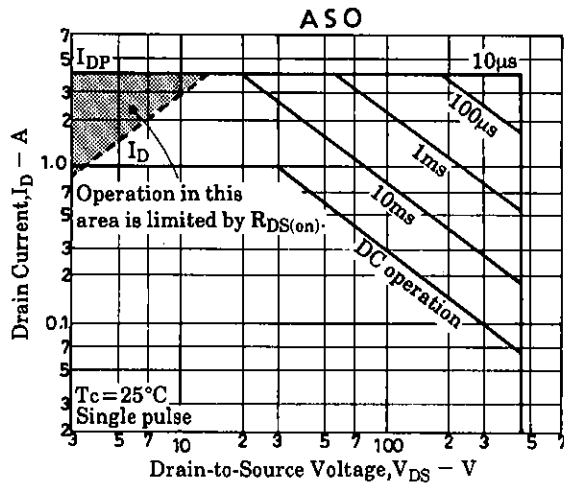
Package Dimensions 2092B



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