

2SK2406

Ultrahigh-Speed Switching, Motor Driver Applications

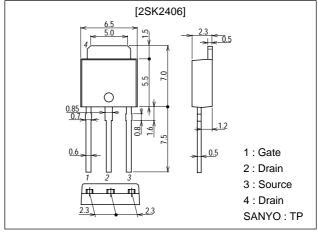
Features

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

Package Dimensions

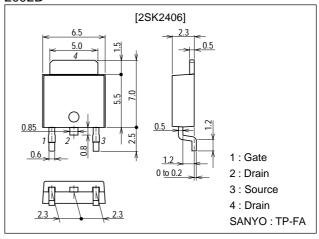
unit:mm

2083B



unit:mm

2092B



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Specifications

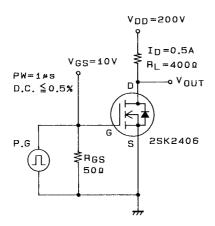
Absolute Maximum Ratings at Ta = 25°C

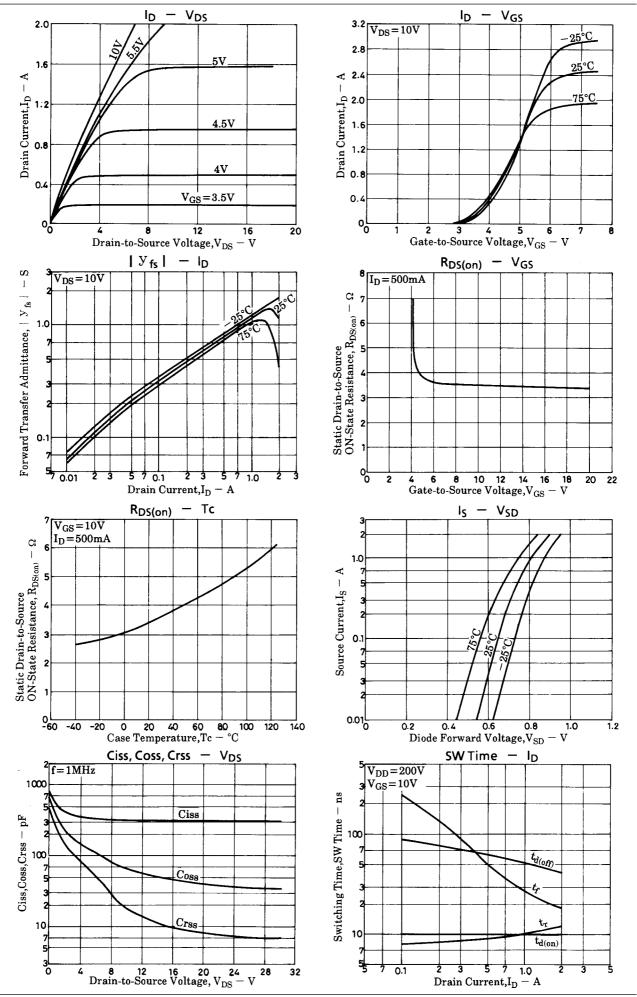
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		450	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	ΙD		1	Α
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	4	Α
Allowable Power Dissipation	D-		1	W
	P _D	Tc=25°C	30	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

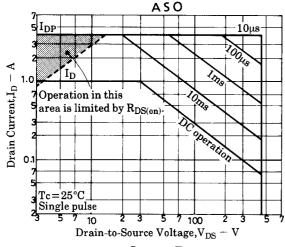
Electrical Characteristics at Ta = 25°C

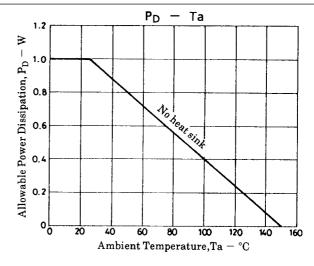
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	UIIIL
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =1mA, V _{GS} =0	450			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =450V, V _{GS} =0			1	mA
Gate-to-Source Leakage Current	IGSS	$V_{GS}=\pm30V$, $V_{DS}=0$			±100	nA
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	2.0		3.0	V
Forward Transfer Admittance	yfs	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	Ciss	V _{DS} =20V, f=1MHz		300		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		40		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		8		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		10		ns
Rise Time	t _r	See specified Test Circuit		9		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit		60		ns
Fall Time	t _f	See specified Test Circuit		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

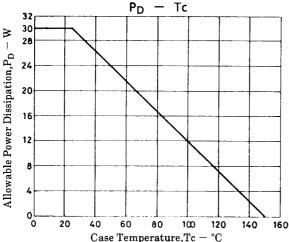
Switching Time Test Circuit











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