

2SK1908

Ultrahigh-Speed Switching Applications

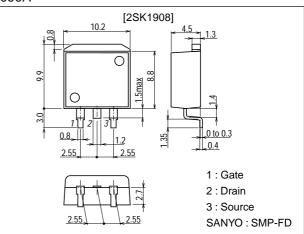
Features

- \cdot Low ON resistance.
- · Ultrahigh-speed switching.
- · Low-voltage drive.
- Surface mount type device making the following possible.
- Reduction in the number of manufacturing processes for 2SK1908-applied equipment.
- · High-density surface mount applications.
- · Small size of 2SK1908-applied equipment.

Package Dimensions

unit:mm

2090A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		100	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	۱ _D		15	A
Drain Current (Pulse)	I _{DP}	PW≤10µs, duty cycle≤1%	60	Α
Allowable Power Dissipation	PD		1.65	W
		Tc=25°C	60	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	Onit
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0	100			V
Gate-to-Source Breakdown Voltage	V(BR)GSS	$I_{G}=\pm 100\mu A$, $V_{DS}=0$	±20			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =100V, V _{GS} =0			100	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.0		2.0	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =7A	7	11.5		S
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D =7A, V _{GS} =10V		100	135	mΩ
	R _{DS(on)}	ID=7A, VGS=4V		135	180	mΩ

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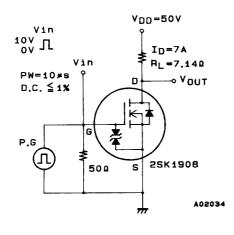
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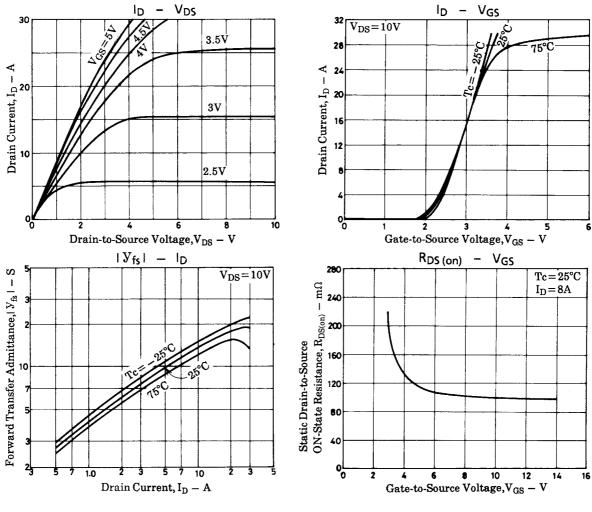
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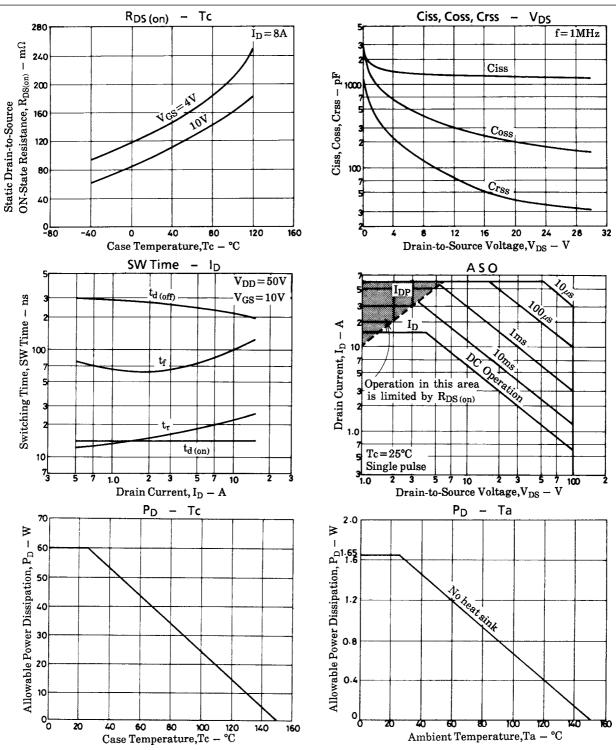
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Input Capacitance	Ciss	V _{DS} =200V, f=1MHz		1230		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		200		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		40		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		14		ns
Rise Time	t _r	See specified Test Circuit		21		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit		230		ns
Fall Time	tf	See specified Test Circuit		90		ns
Diode Forward Voltage	V _{SD}	I _S =15A, V _{GS} =0		1.0	1.5	V

Switching Time Test Circuit







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