



Ultrahigh-Speed Switching Applications

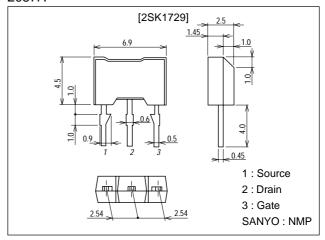
Features

- · Low ON resistance.
- · Ultrahigh-speed switching.
- · Low-voltage drive.
- · Meets radial taping.

Package Dimensions

unit:mm

2087A



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}		±15	V
Drain Current (DC)	I _D		0.5	А
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	2	А
Allowable Power Dissipation	PD		1	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	Offic
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =1mA, V _{GS} =0	100			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =100V, V _{GS} =0			100	μA
Gate-to-Source Leakage Current	IGSS	V _{GS} =±12V, V _{DS} =0			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	1.0		2.0	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =250mA	400	700		mS
Static Drain-to-Source ON-State Resistance	R _{DS(on)}	I _D =250mA, V _{GS} =10V		2.7	3.5	Ω
	R _{DS(on)}	I _D =250mA, V _{GS} =4V		3.2	4.2	Ω

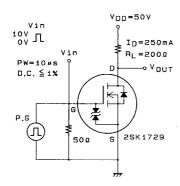
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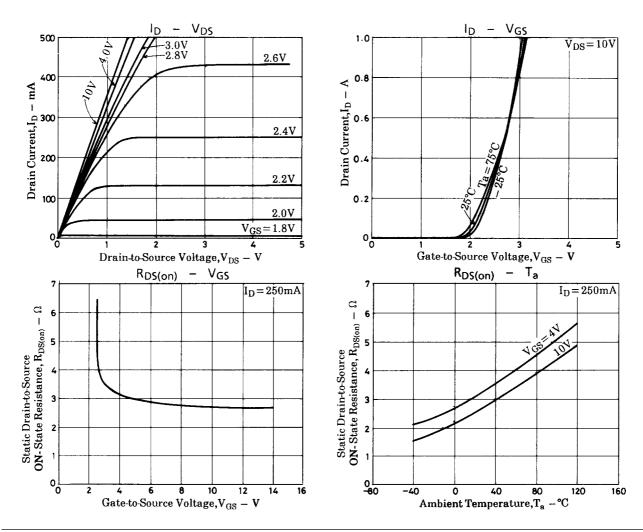
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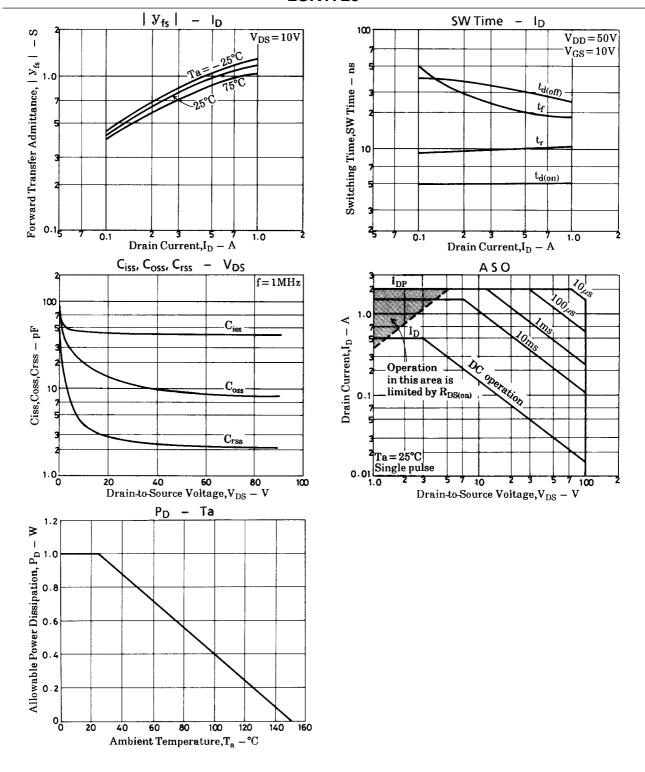
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Parameter	Symbol	Conditions	Ratings	Unit
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz	45	pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz	15	pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz	3	pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit	5	ns
Rise Time	t _r	See specified Test Circuit	10	ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit	35	ns
Fall Time	t _f	See specified Test Circuit	25	ns
Diode Forward Voltage	V _{SD}	I _S =500mA, V _{GS} =0	1.0	V

Switching Time Test Circuit







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