N-Channel Silicon MOSFET

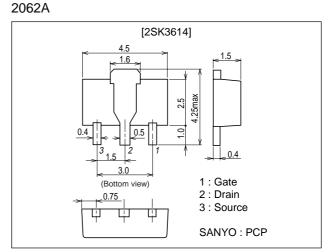


Features

- Low ON-resistance.
- Ultrahigh-speed switching.
- 4V drive.

Package Dimensions

unit : mm



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		60	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	۱D		4	А
Drain Current (Pulse)	IDP	PW≤10µs, duty cycle≤1%	16	А
Allowable Power Dissipation	De	Mounted on a ceramic board (250mm ² X0.8mm)	1.5	W
	PD	Tc=25°C	3.5	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

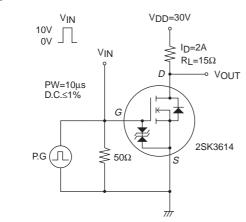
Parameter	Symbol	Conditions	Ratings			Linit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0	60			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =60V, V _{GS} =0			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =2A	2	3.6		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	ID=2A, VGS=10V		110	145	mΩ
	R _{DS} (on)2	ID=2A, VGS=4V		150	215	mΩ
Marking : LK Continued of				next page		

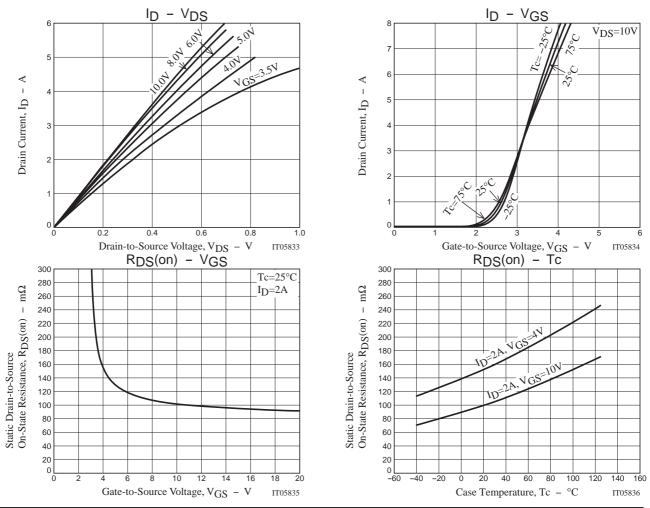
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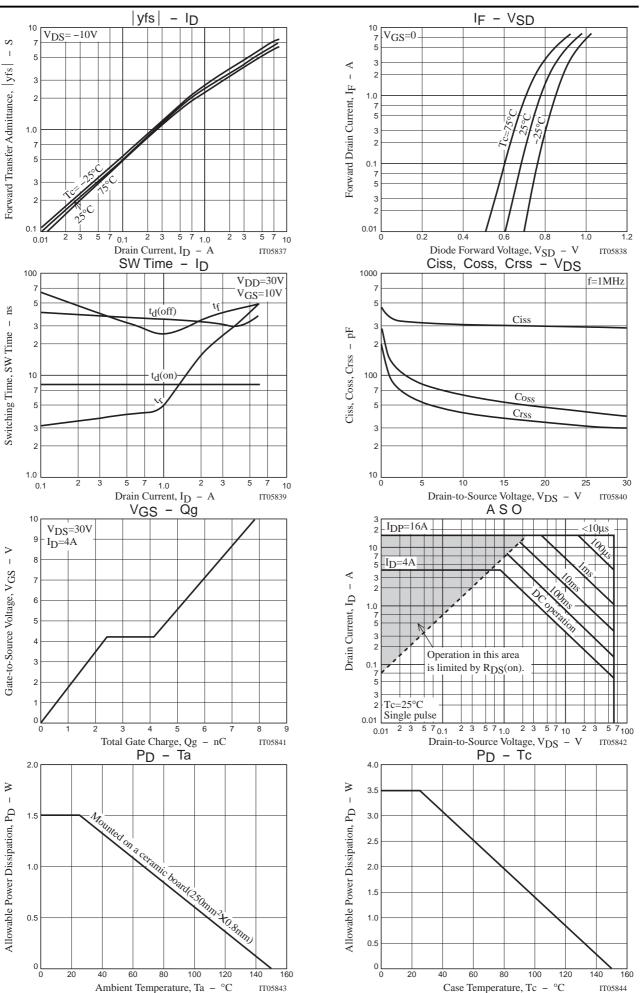
SANYO Electric Co., Ltd. Semiconductor Company TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN Continued from preceding page.

Parameter	Sumbol	Conditions		Ratings		
	Symbol		min	typ	max	Unit
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		300		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		54		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		34		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		8		ns
Rise Time	tr	See specified Test Circuit.		16		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		32		ns
Fall Time	tf	See specified Test Circuit.		34		ns
Total Gate Charge	Qg	V _{DS} =30V, V _{GS} =10V, I _D =4A		7.8		nC
Gate-to-Source Charge	Qgs	V _{DS} =30V, V _{GS} =10V, I _D =4A		2.4		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =30V, V _{GS} =10V, I _D =4A		1.7		nC
Diode Forward Voltage	V _{SD}	IS=4A, VGS=0		0.86	1.2	V

Switching Time Test Circuit







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