

# SANYO Semiconductors

# DATA SHEET



## N-Channel Silicon MOSFET **General-Purpose Switching Device Applications**

### **Features**

- · Low ON-resistance.
- Low Qg.
- · Ultrahigh-speed switching.

## Specifications

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		600	V
Gate-to-Source Voltage	VGSS		±30	V
Drain Current (DC)	ID		3	А
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	12	Α
Allowable Power Dissipation			2.0	W
	PD	Tc=25°C	25	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C
Avalanche Energy (Single Pulse) *1	EAS		49	mJ
Avalanche Current *2	IAV		3	А

\*1 VDD=50V, L=10mH, IAV=3A

\*2 L≤10mH, single pulse

#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	600			V
Zero-Gate Voltage Drain Current	IDSS	V <sub>DS</sub> =600V, V <sub>GS</sub> =0V			1.0	mA
Gate-to-Source Leakage Current	IGSS	V <sub>GS</sub> =±30V, V <sub>DS</sub> =0V			±100	nA
Cutoff Voltage	VGS(off)	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	3.5		5.5	V
Marking : K2624				С	ontinued on	next page.

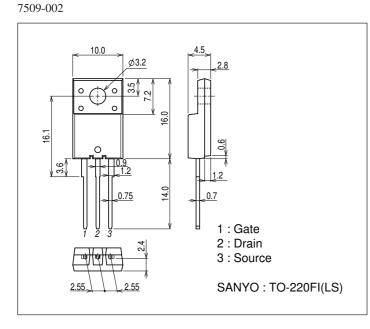
Marking : K2624

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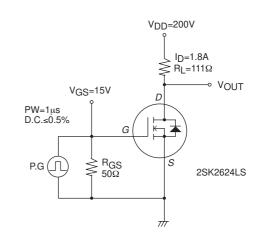
Parameter	Symbol	Conditions		Ratings		
			min	typ	max	Unit
Forward Transfer Admittance	yfs	V <sub>DS</sub> =10V, I <sub>D</sub> =1.8A	1.0	2.0		S
Static Drain-to-Source On-State Resistance	R <sub>DS</sub> (on)	I <sub>D</sub> =1.8A, V <sub>GS</sub> =15V		2.0	2.6	Ω
Input Capacitance	Ciss	V <sub>DS</sub> =20V, f=1MHz		550		pF
Output Capacitance	Coss	V <sub>DS</sub> =20V, f=1MHz		165		pF
Reverse Transfer Capacitance	Crss	V <sub>DS</sub> =20V, f=1MHz		85		pF
Total Gate Charge	Qg	V <sub>DS</sub> =200V, I <sub>D</sub> =3A, V <sub>GS</sub> =10V		15		nC
Turn-ON Delay Time	t <sub>d</sub> (on)	See specified Test Circuit.		17		ns
Rise Time	tr	See specified Test Circuit.		17		ns
Turn-OFF Delay Time	t <sub>d</sub> (off)	See specified Test Circuit.		40		ns
Fall Time	tf	See specified Test Circuit.		22		ns
Diode Forward Voltage	VSD	IS=3A, VGS=0V		0.98	1.2	V

#### Package Dimensions

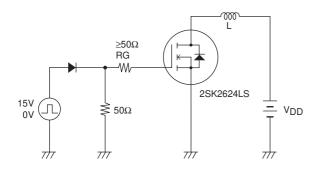
unit : mm (typ)

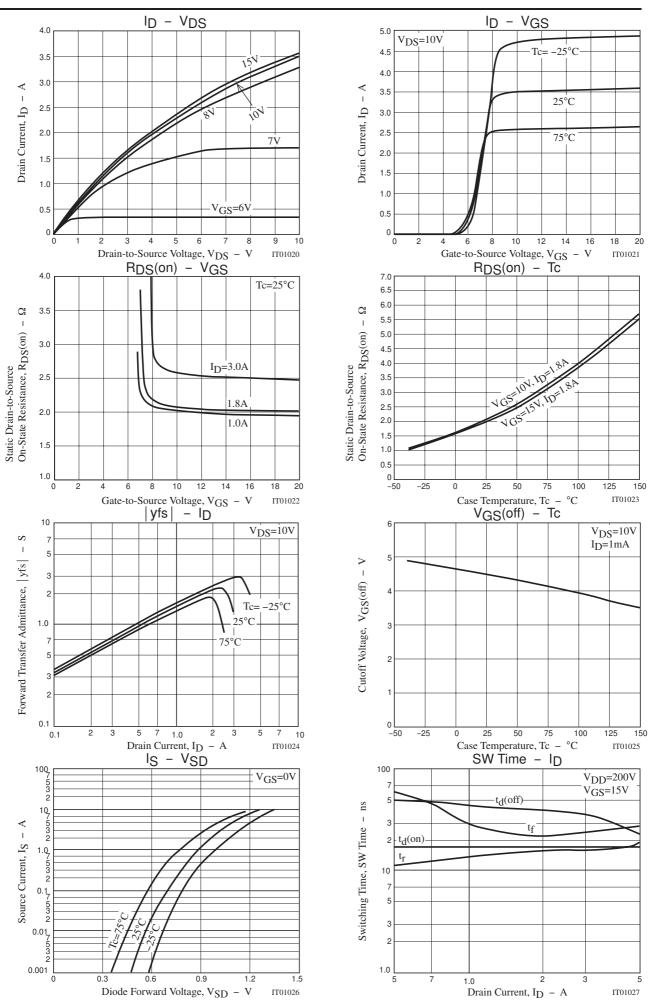


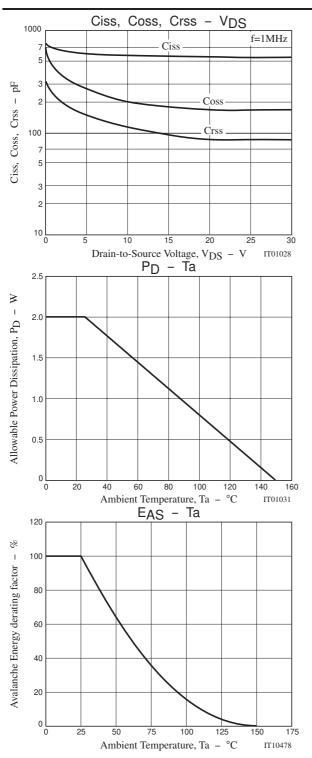
#### **Switching Time Test Circuit**

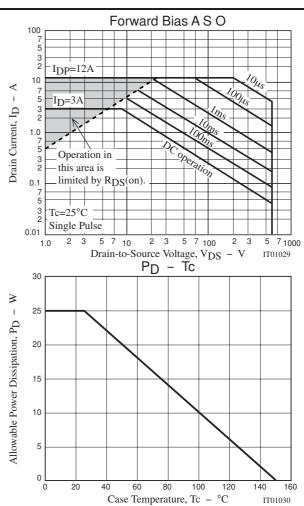


#### **Avalanche Resistance Test Circuit**









Note on usage : Since the 2SK2624LS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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