



SANYO Semiconductors

## DATA SHEET

# 2SK2624FS — N-Channel Silicon MOSFET General-Purpose Switching Device Applications

## Features

- Low ON-resistance.
- Low  $Q_g$ .
- Ultrahigh-speed switching.

## Specifications

Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		600	V
Gate-to-Source Voltage	$V_{GS}$		$\pm 30$	V
Drain Current (DC)	$I_D$		3.5	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	12	A
Allowable Power Dissipation	$P_D$		2.0	W
		$T_c=25^\circ\text{C}$ (SANYO's ideal heat dissipation condition)*1	25	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$
Avalanche Energy (Single Pulse) *2	$E_{AS}$		49	mJ
Avalanche Current *3	$I_{AV}$		3	A

Note : \*1 SANYO's condition is radiation from backside.

The method is applying silicone grease to the backside of the device and attaching the device to water-cooled radiator made of aluminium.

\*2  $V_{DD}=50\text{V}$ ,  $L=10\text{mH}$ ,  $I_{AV}=3\text{A}$ \*3  $L \leq 10\text{mH}$ , Single pulse

Marking : K2624

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2SK2624FS

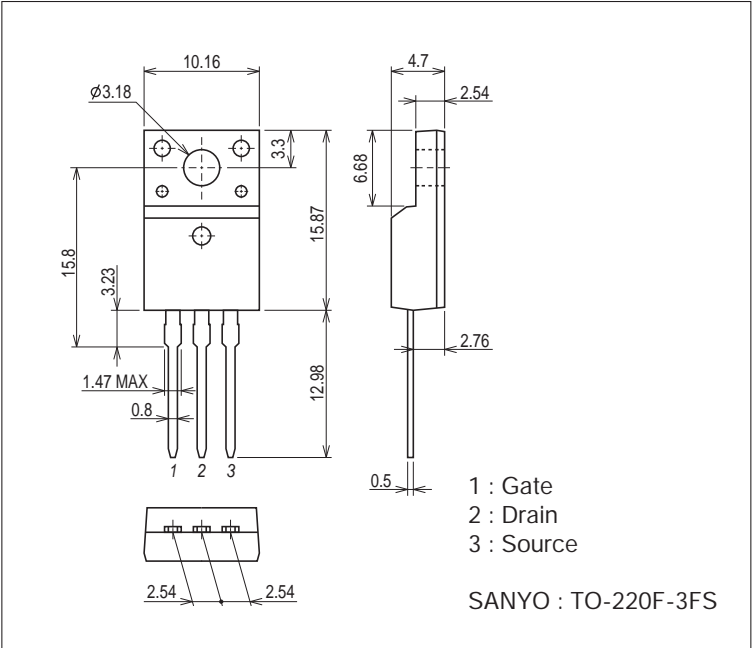
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=10mA, V_{GS}=0V$	600			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=480V, V_{GS}=0V$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 30V, V_{DS}=0V$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	3.5		5.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1.8A$	1.0	2.0		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=1.8A, V_{GS}=15V$		2.0	2.6	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		550		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		165		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		85		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		17		ns
Rise Time	$t_r$	See specified Test Circuit.		17		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		40		ns
Fall Time	$t_f$	See specified Test Circuit.		22		ns
Total Gate Charge	$Q_g$	$V_{DS}=200V, V_{GS}=10V, I_D=3A$		15		nC
Diode Forward Voltage	$V_{SD}$	$I_S=3A, V_{GS}=0V$		0.98	1.2	V

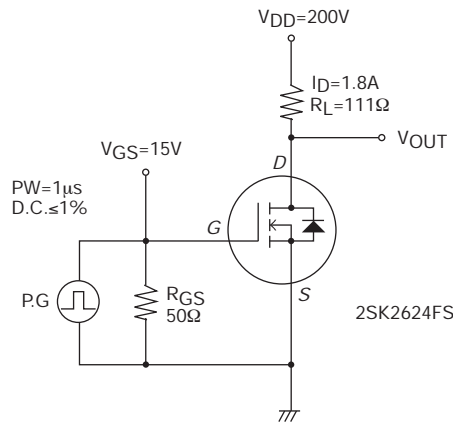
Package Dimensions

unit : mm (typ)

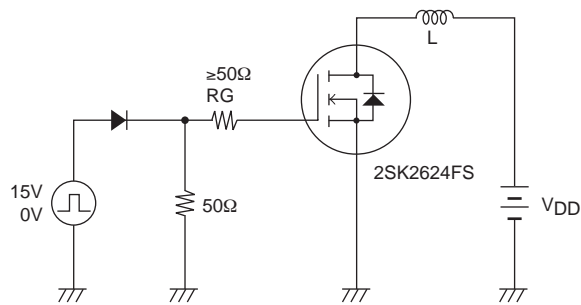
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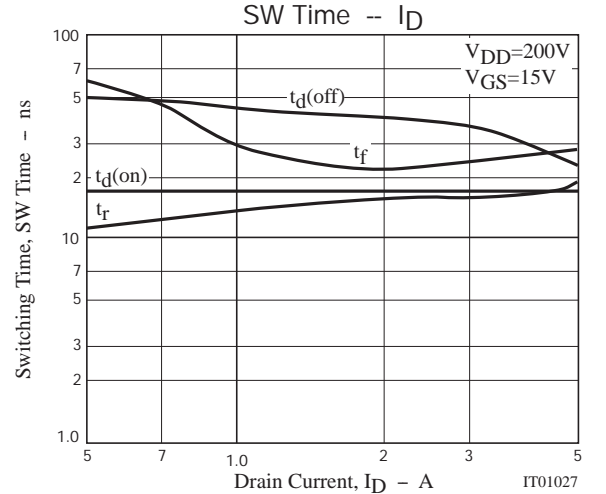
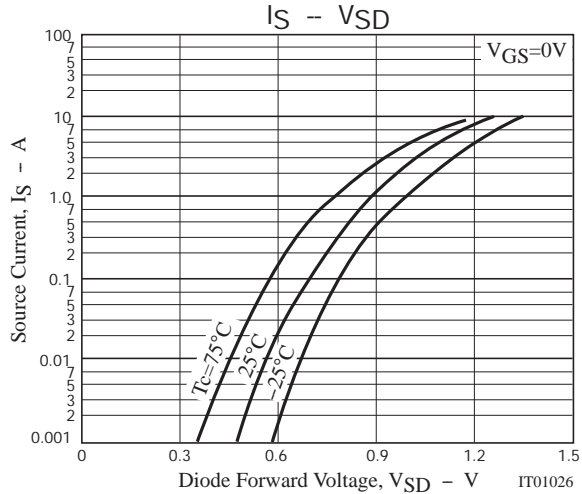
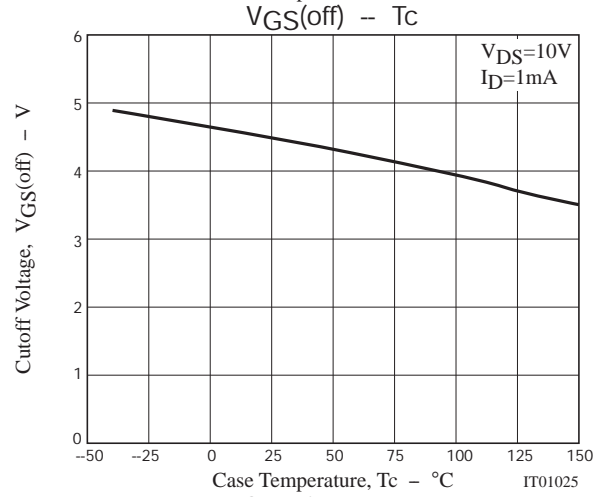
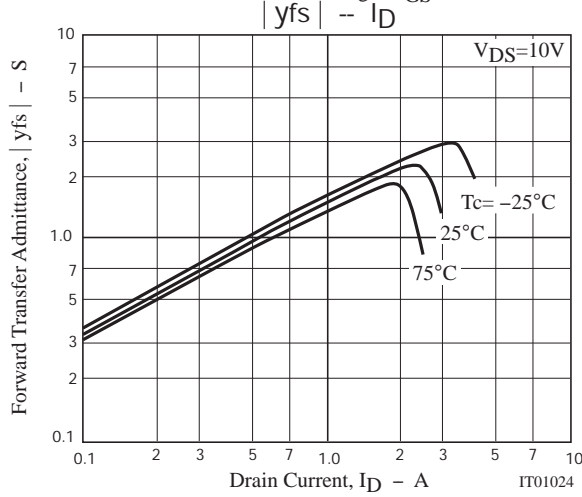
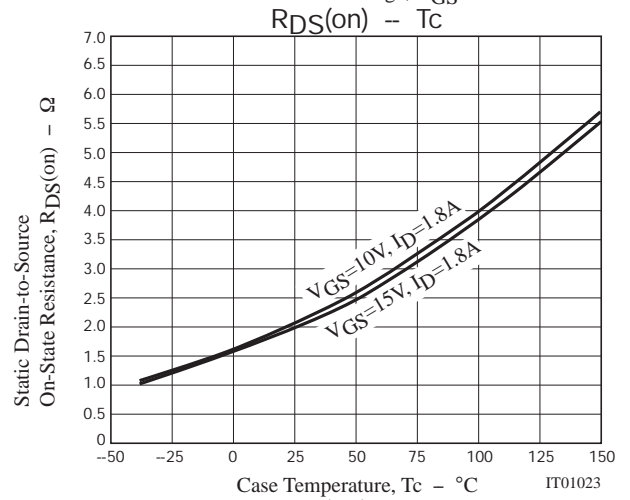
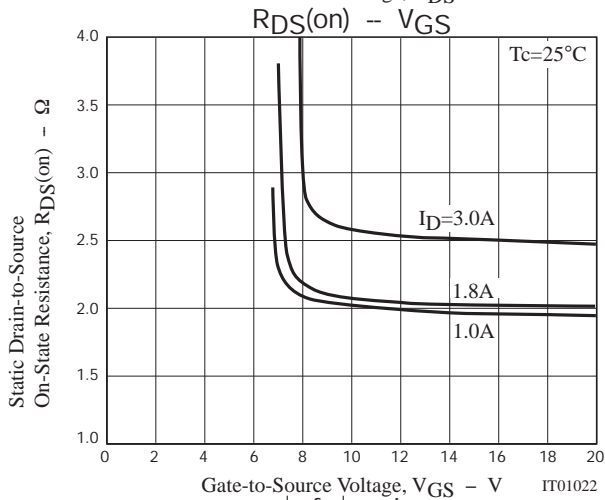
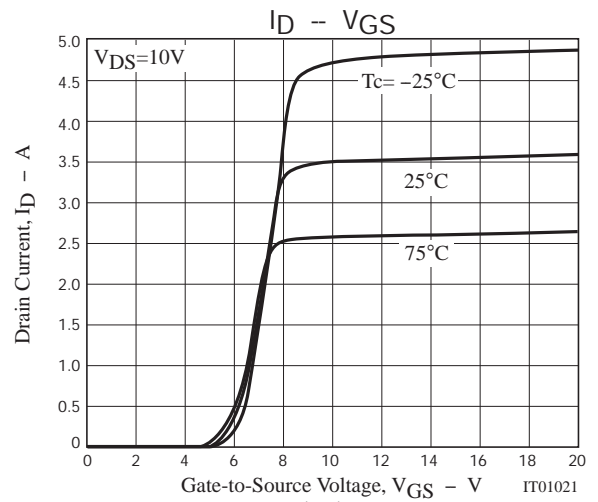
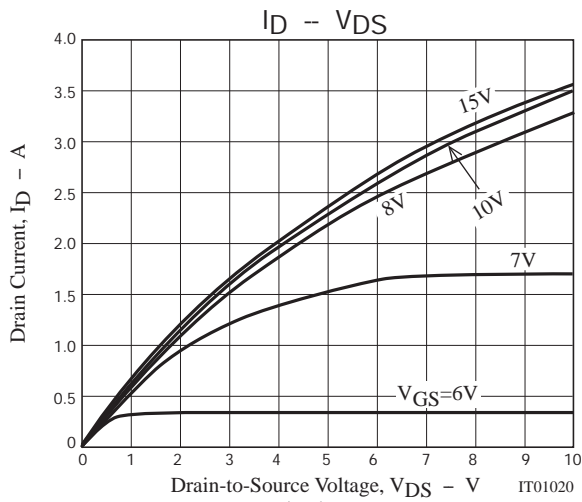


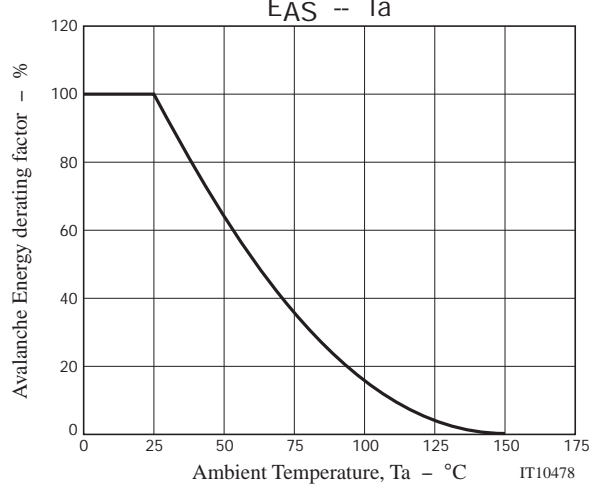
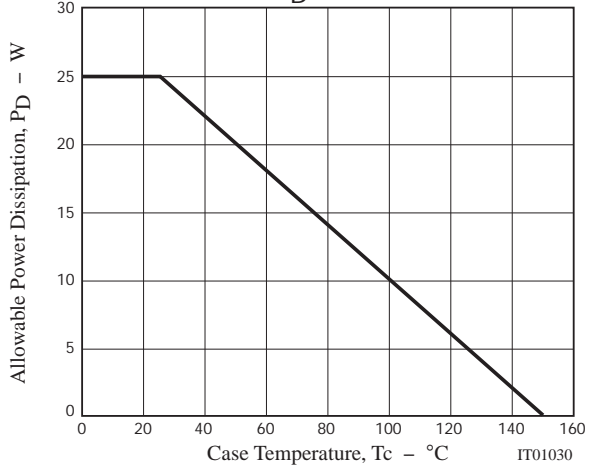
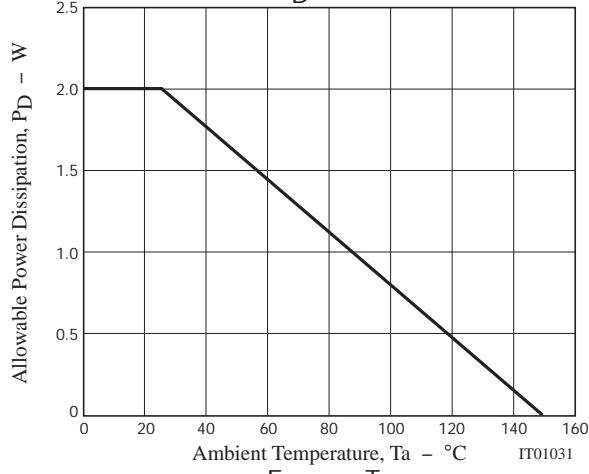
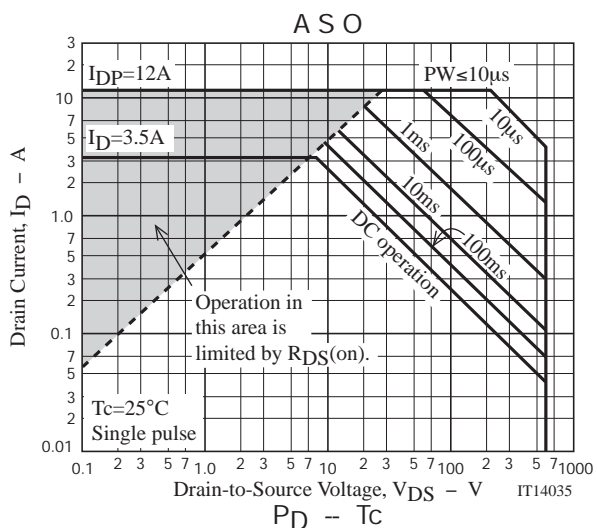
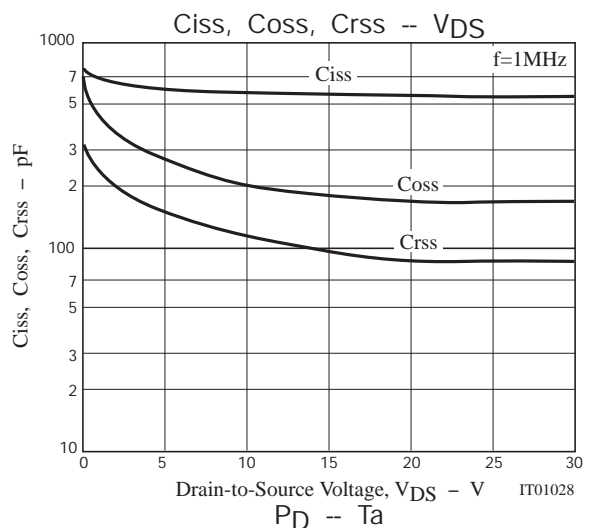
Switching Time Test Circuit



Avalanche Resistance Test Circuit







Note on usage : Since the 2SK2624FS is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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