

2SK761

Silicon N-channel Power F-MOS FET

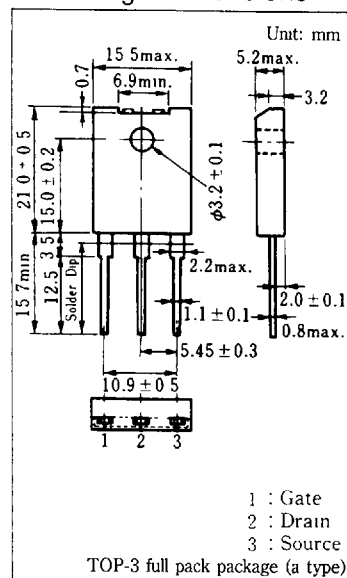
■ Features

- Low ON resistance $R_{DS(on)}$: $R_{DS(on)} = 0.15\Omega$ (typ.)
- High switching rate : $t_f = 120\text{ns}$ (typ.)
- No secondary breakdown
- Large power

■ Application

- DC-DC converter
- No contact relay
- Solenoid drive
- Motor drive

■ Package Dimensions

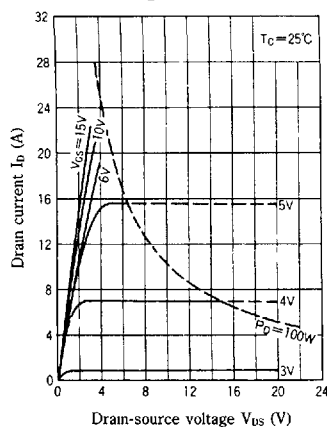
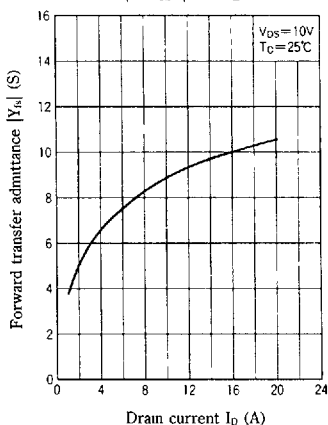
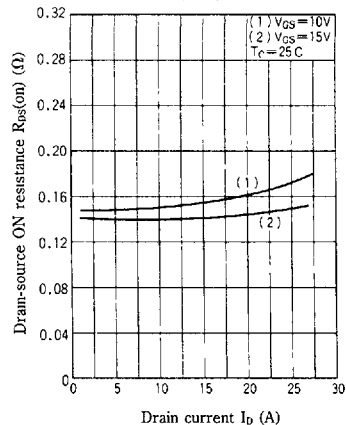
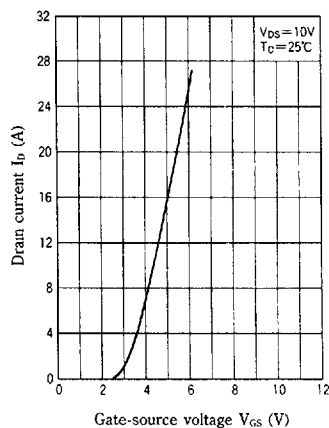
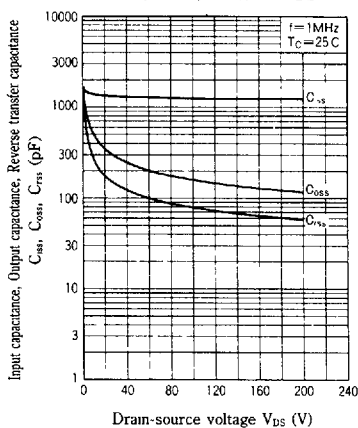
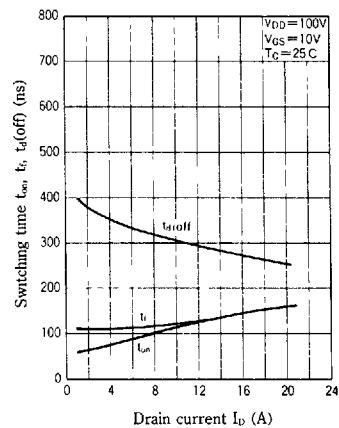
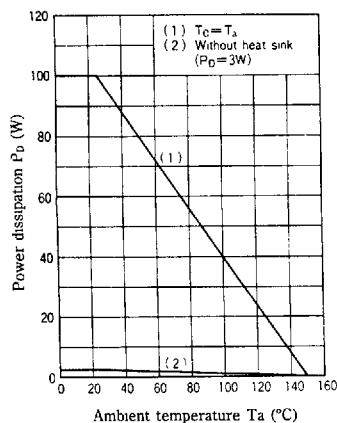


■ Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

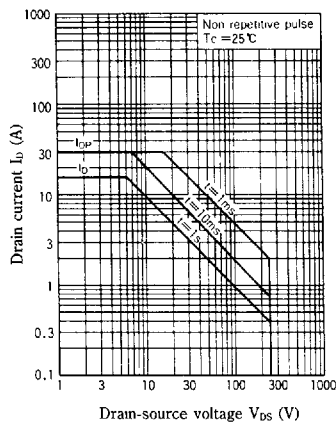
Item	Symbol	Value	Unit
Drain-source voltage	V_{DS}	250	V
Gate-source voltage	V_{GS}	± 20	V
Drain current	DC I_D	15	A
	Peak-to-peak value I_{DP}	30	
Power dissipation	$T_c = 25^\circ\text{C}$ P_D	100	W
	$T_a = 25^\circ\text{C}$ P_D	3.0	
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Electrical Characteristics ($T_c = 25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain current	I_{DS}	$V_{DS} = 200\text{V}$, $V_{GS} = 0$			0.1	mA
Gate-source current	I_{GS}	$V_{GS} = \pm 20\text{V}$, $V_{DS} = 0$			± 1	μA
Drain-source voltage	V_{DS}	$I_D = 1\text{mA}$, $V_{GS} = 0$	250			V
Gate threshold voltage	V_{th}	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	1		5	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$, $I_D = 8\text{A}$		0.15	0.22	Ω
Forward transfer admittance	$ Y_{fs} $	$V_{GS} = 10\text{V}$, $I_D = 8\text{A}$	5.5	9.0		S
Input capacitance	C_{iss}	$V_{DS} = 20\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$		1410		pF
Output capacitance	C_{oss}			495		pF
Reverse transfer capacitance	C_{rss}			255		pF
Turn-on time	t_{on}	$V_{GS} = 10\text{V}$, $I_D = 8\text{A}$ $V_{DD} = 100\text{V}$, $R_L = 12.5\Omega$		100		ns
Fall time	t_f			120		ns
Delay time	$t_d(\text{off})$			320		ns

$I_D - V_{DS}$  $|Y_{fs}| - I_D$  $R_{DS(on)} - I_D$  $I_D - V_{GS}$  $C_{iss}, C_{oss}, C_{rss} - V_{DS}$  $t_{on}, t_f, t_d(off) - I_D$  $P_D - T_a$ 

Safety operation area (ASO)

 $R_{DS(on)} - I_D$ 