

SANYO

No.2465A

2SK688

N-Channel MOS FET

HIGH-SPEED POWER SWITCHING APPLICATIONS

Features

Low-on resistance, very high-speed switching, converters

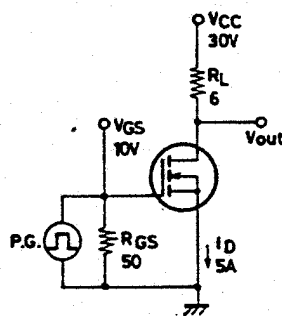
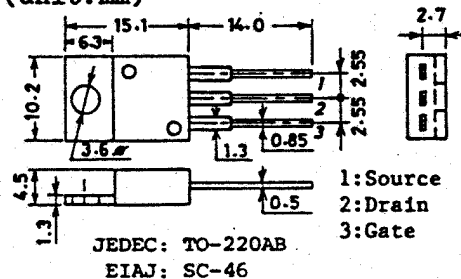
Absolute Maximum Ratings at Ta=25°C

			unit
Drain to Source Voltage	V_{DS}	60	V
Gate to Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	I_D	15	A
Peak Drain Current(Pulse)	$I_{D \text{ peak}}$	25	A
Allowable Power Dissipation	P_D	60	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
D-S Breakdown Voltage	V_{DSS}	$I_D=1\text{mA}, V_{GS}=0$	60			V
Drain Current	I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0$			100	μA
G-S Leakage Current	I_{GSS}	$V_{GS}=\pm 20\text{V}, V_{DS}=0$			± 100	nA
Cutoff Voltage	$V_{GS(\text{off})}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	1.5		4.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}, I_D=8\text{A}$	4.0	5.5		S
Saturation Resistance	$r_{DS(\text{on})}$	$I_D=8\text{A}, V_{GS}=10\text{V}$		0.08	0.12	ohm
Input Capacitance	c_{iss}	$V_{DS}=20\text{V}, f=1\text{MHz}$		900		pF
Output Capacitance	c_{oss}	$V_{DS}=20\text{V}, f=1\text{MHz}$		450		pF
Reverse Transfer Capacitance	c_{rss}	$V_{DS}=20\text{V}, f=1\text{MHz}$		180		pF
Turn-on Time	t_{on}	$I_D=5\text{A}, V_{GS}=10\text{V}$		90		ns
Turn-off Time	t_{off}	$I_D=5\text{A}, V_{GS}=10\text{V}$		110		ns

Note: Be careful in handling the 2SK688 because it has no protect diode between gate and source.

Switching Time Test Circuit**Case Outline 2052A**
(unit:mm)

These specifications are subject to change without notice.

SANYO ELECTRIC CO., LTD. SEMICONDUCTOR DIVISION
15-13, 6-CHOME, SOTOKANDA, CHIYODA-KU, TOKYO 101 JAPAN