

2SK2220, 2SK2221

Silicon N Channel MOS FET

Application

Low frequency power amplifier
Complementary pair with 2SJ351, 2SJ352

Features

- High power gain
- Excellent frequency response
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes

Table 1 Ordering Information

Type No.	V _{DSS}
2SK2220	180 V
2SK2221	200 V

Table 2 Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Ratings	Unit
Drain to source voltage	2SK2220	V _{DSX}	180	V
	2SK2221		200	
Gate to source voltage		V _{GSS}	±20	V
Drain current		I _D	8	A
Body-drain diode reverse drain current		I _{DR}	8	A
Channel dissipation		P _{ch} *	100	W
Channel temperature		T _{ch}	150	°C
Storage temperature		T _{stg}	-55 to +150	°C

* Value at T_c = 25 °C

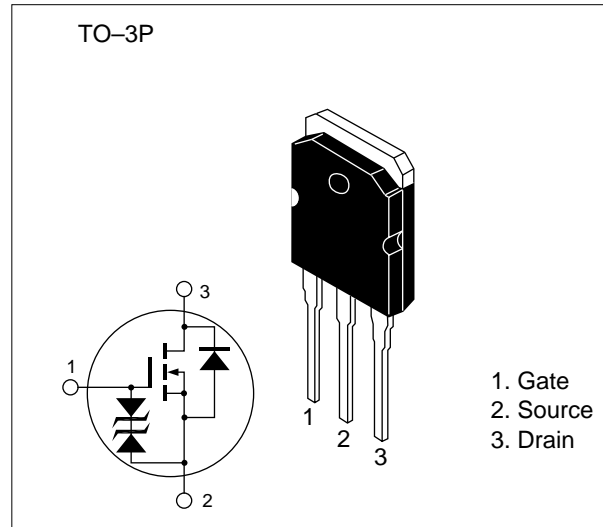
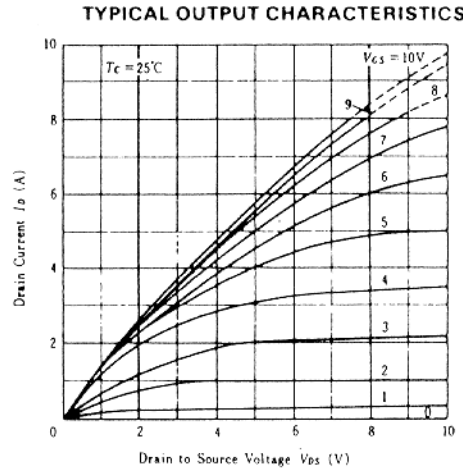
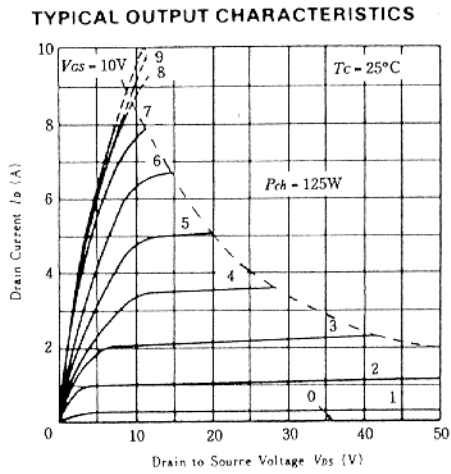
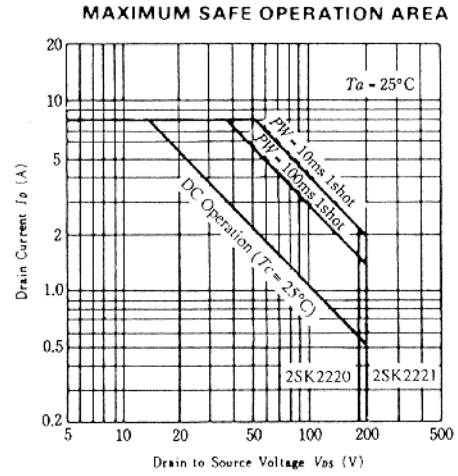
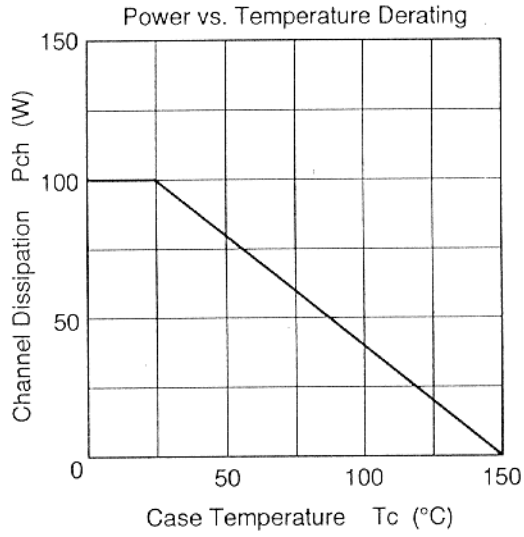


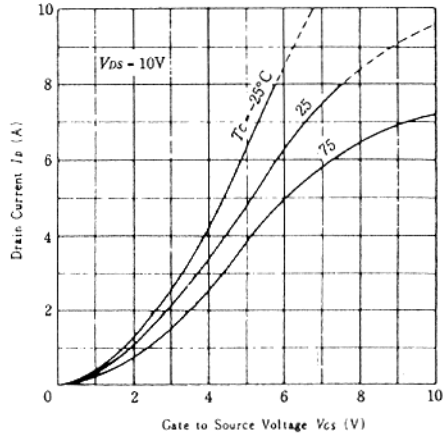
Table 3 Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SK2220	180	—	—	V	I _D = 10 mA, V _{GS} = -10 V
	2SK2221	200	—	—		
Gate to source breakdown voltage	V _{(BR)GSS}	±20	—	—	V	I _G = ±100 μA, V _{DS} = 0
Gate to source cutoff voltage	V _{GS(off)}	0.15	—	1.45	V	I _D = 100 mA V _{DS} = 10 V
Drain to source saturation voltage	V _{DS(sat)}	—	—	12	V	I _D = 8 A, V _{GD} = 0 V*
Forward transfer admittance	y _{fs}	0.7	1.0	1.4	S	I _D = 3 A V _{DS} = 10 V *
Input capacitance	C _{iss}	—	600	—	pF	V _{GS} = -5 V
Output capacitance	C _{oss}	—	800	—	pF	V _{DS} = 10 V
Reverse transfer capacitance	C _{rss}	—	8	—	pF	f = 1 MHz
Turn-on time	t _{on}	—	250	—	ns	V _{DD} = 30 V
Turn-off time	t _{off}	—	90	—	ns	I _D = 4 A

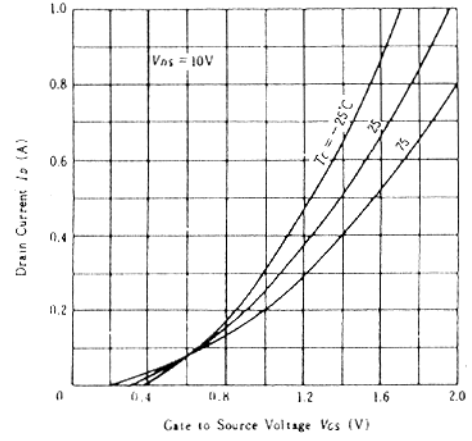
* Pulse Test



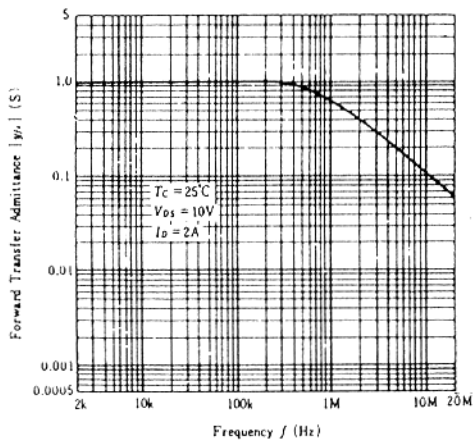
TYPICAL TRANSFER CHARACTERISTICS



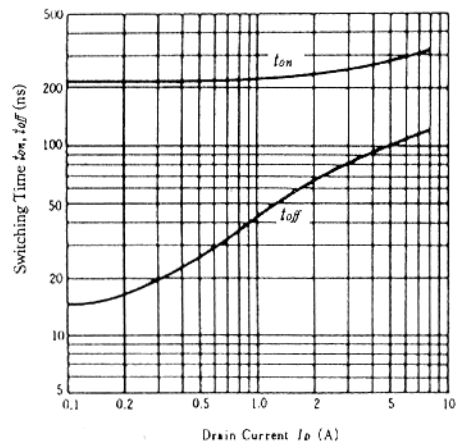
TYPICAL TRANSFER CHARACTERISTICS



FORWARD TRANSFER ADMITTANCE VS. FREQUENCY



SWITCHING TIME VS. DRAIN CURRENT



2SK2220, 2SK2221

