

## 2SK1056, 2SK1057, 2SK1058

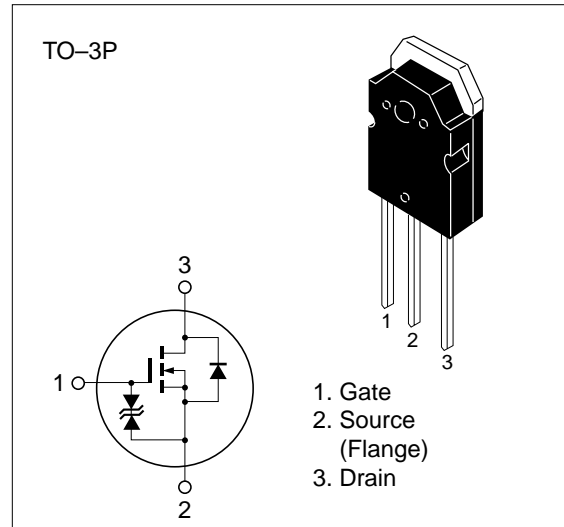
### Silicon N-Channel MOS FET

#### Application

Low frequency power amplifier  
Complementary pair with 2SJ160, 2SJ161 and 2SJ162

#### Features

- Good frequency characteristic
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes
- Suitable for audio power amplifier



**Table 1 Absolute Maximum Ratings** (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	2SK1056	120	V
	2SK1057	140	
	2SK1058	160	
Gate to source voltage	V <sub>GSS</sub>	±15	V
Drain current	I <sub>D</sub>	7	A
Body to drain diode reverse drain current	I <sub>DR</sub>	7	A
Channel dissipation	P <sub>ch</sub> *	100	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* Value at T<sub>C</sub> = 25 °C

**Table 2 Electrical Characteristics** (Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage	2SK1056	$V_{(BR)DSX}$	120	—	—	V	$I_D = 10 \text{ mA}, V_{GS} = -10 \text{ V}$
	2SK1057		140				
	2SK1058		160				
Gate to source breakdown voltage		$V_{(BR)GSS}$	±15	—	—	V	$I_G = \pm 100 \mu\text{A}, V_{DS} = 0$
Gate to source cutoff voltage		$V_{GS(off)}$	0.15	—	1.45	V	$I_D = 100 \text{ mA}, V_{DS} = 10 \text{ V}$
Drain to source saturation voltage		$V_{DS(sat)}$	—	—	12	V	$I_D = 7 \text{ A}, V_{GD} = 0^*$
Forward transfer admittance		$ y_{fs} $	0.7	1.0	1.4	S	$I_D = 3 \text{ A}, V_{DS} = 10 \text{ V}^*$
Input capacitance		$C_{iss}$	—	600	—	pF	$V_{GS} = -5 \text{ V}, V_{DS} = 10 \text{ V},$
Output capacitance		$C_{oss}$	—	350	—	pF	$f = 1 \text{ MHz}$
Reverse transfer capacitance		$C_{rss}$	—	10	—	pF	
Turn-on time		$t_{on}$	—	180	—	ns	$V_{DD} = 20 \text{ V}, I_D = 4 \text{ A},$
Turn-off time		$t_{off}$	—	60	—	ns	

\* Pulse Test

