

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE

2SK709

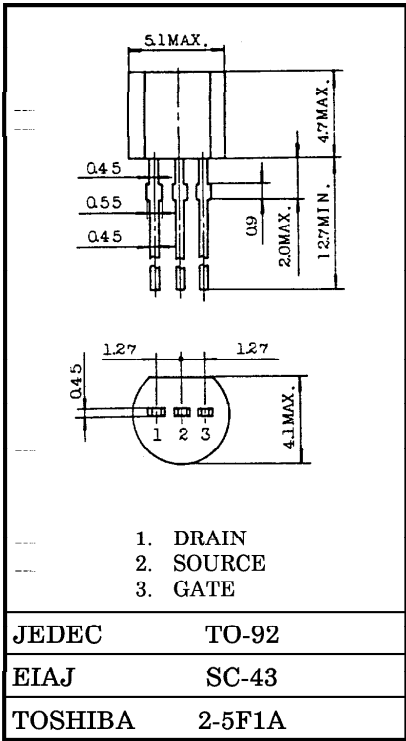
HIGH FREQUENCY AMPLIFIER APPLICATIONS.
AM HIGH FREQUENCY AMPLIFIER APPLICATIONS.
AUDIO FREQUENCY AMPLIFIER APPLICATIONS.

Unit in mm

- High $|Y_{fs}|$: $|Y_{fs}|=25\text{mS}$ (Typ.)
- Low C_{iss} : $C_{iss}=7.5\text{pF}$ (Typ.)
- Low Noise

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	-20	V
Gate Current	I_G	10	mA
Drain Power Dissipation	P_D	300	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~125	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Weight : 0.21g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS} = -15\text{V}, V_{DS} = 0$	—	—	-1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$V_{DS} = 0, I_G = -100\mu\text{A}$	-20	—	—	V
Drain Current	I_{DSS} (Note)	$V_{DS} = 5\text{V}, V_{GS} = 0$	6	—	32	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS} = 5\text{V}, I_D = 1\mu\text{A}$	—	—	-2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{kHz}$	15	25	—	mS
Input Capacitance	C_{iss}	$V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$	—	7.5	10	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DG} = 5\text{V}, I_D = 0, f = 1\text{MHz}$	—	2	3	pF
Noise Figure	NF	$V_{DS} = 5\text{V}, I_D = 1\text{mA}$ $R_g = 1\text{k}\Omega, f = 1\text{kHz}$	—	0.5	3	dB

(Note) : I_{DSS} Classification GR : 6~12mA, BL : 10~20mA, V : 16~32mA

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