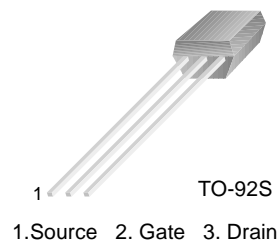


# KSK596

## Capacitor Microphone Applications

- Especially Suited for use in Audio, Telephone Capacitor Microphones
- Excellent Voltage Characteristic
- Excellent Transient Characteristic



## Si N-channel Junction FET

### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{GDO}$	Gate-Drain Voltage	-20	V
$I_G$	Gate Current	10	mA
$I_D$	Drain Current	1	mA
$P_D$	Power Dissipation	100	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{GDO}$	Gate-Drain Breakdown Voltage	$I_G = -100\mu\text{A}$	-20			V
$V_{GS(off)}$	Gate-Source Cut-off Voltage	$V_{DS}=5\text{V}, I_D=1\mu\text{A}$		-0.6	-1.5	V
$I_{DSS}$	Drain Current	$V_{DS}=5\text{V}, V_{GS}=0$	100		350	$\mu\text{A}$
$ Y_{FS} $	Forward Transfer Admittance	$V_{DS}=5\text{V}, V_{GS}=0, f=1\text{MHz}$	0.4	1.2		ms
$C_{iss}$	Input Capacitance	$V_{DS}=5\text{V}, V_{GS}=0, f=1\text{MHz}$		3.5		pF
$C_{rss}$	Output Capacitance	$V_{DS}=5\text{V}, V_{GS}=0, f=1\text{MHz}$		0.65		pF

## $I_{DSS}$ Classification

Classification	A	B	C
$I_{DSS}(\mu\text{A})$	100 ~ 170	150 ~ 240	210 ~ 350

# Typical Characteristics

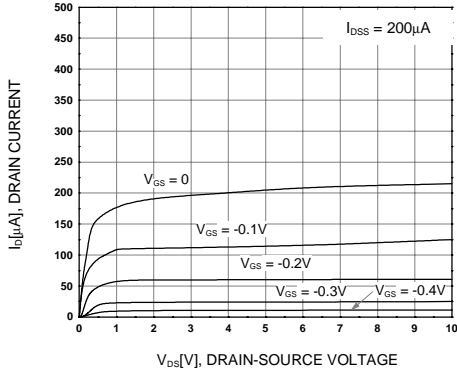


Figure 1.  $I_D$ - $V_{DS}$

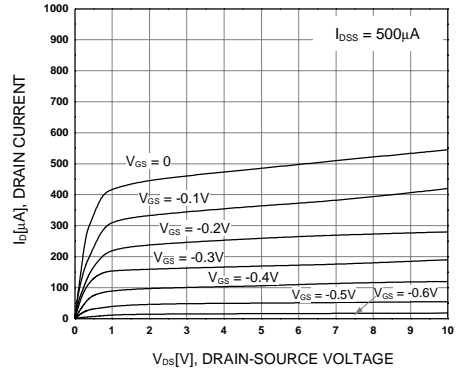


Figure 2.  $I_D$ - $V_{DS}$

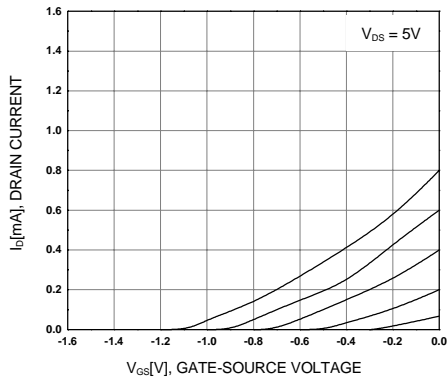


Figure 3.  $I_D$ - $V_{GS}$

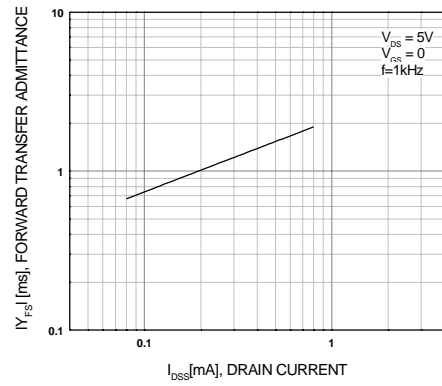


Figure 4.  $|y_{FS}|$ - $I_{DSS}$

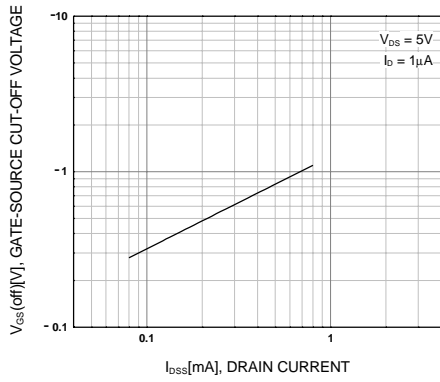


Figure 5.  $V_{GS(off)}$ - $I_{DSS}$

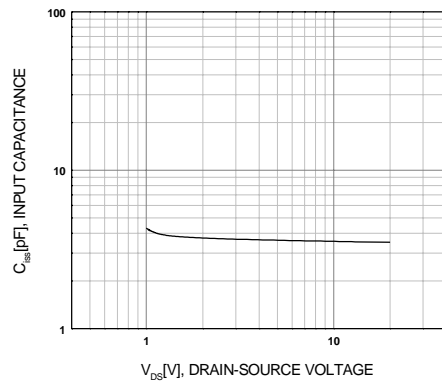


Figure 6.  $C_{iss}$ - $V_{DS}$

# Typical Characteristics (Continued)

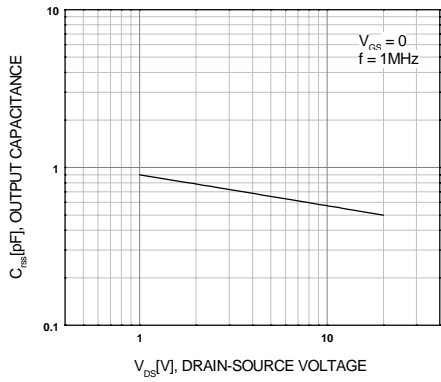


Figure 7.  $C_{RSS}-V_{DS}$

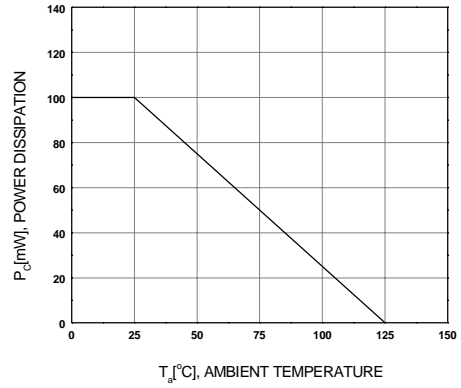
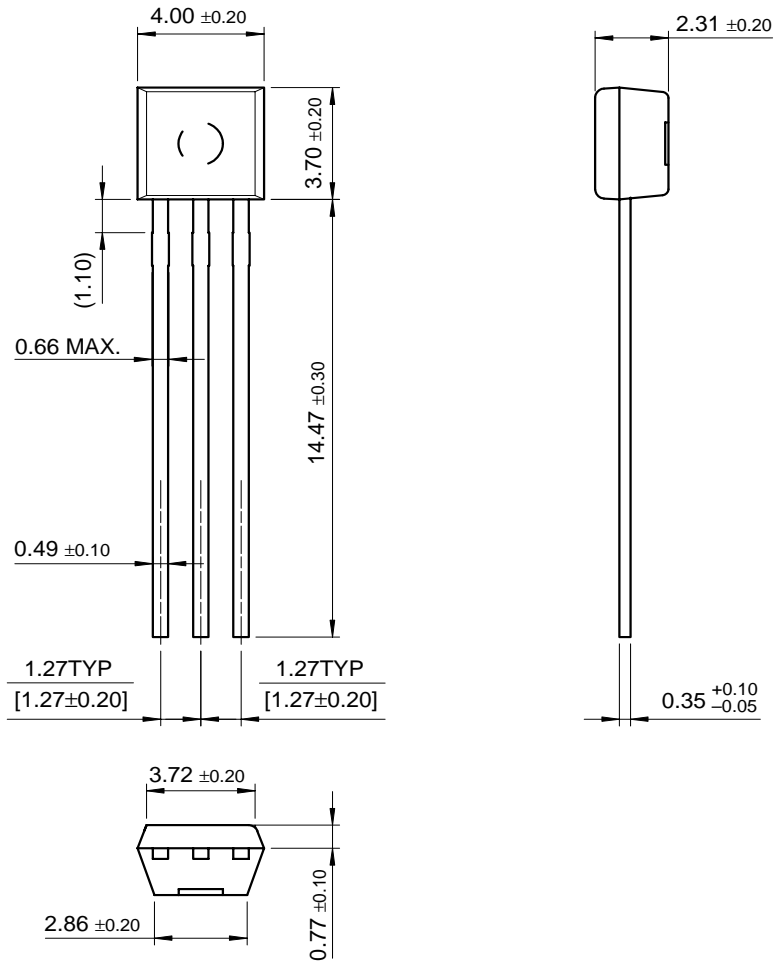


Figure 8.  $P_D-T_A$

# Package Dimensions

## TO-92S



Dimensions in Millimeters

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Bottomless <sup>™</sup>	FAST <sup>®</sup>	LittleFET <sup>™</sup>	Power247 <sup>™</sup>	SuperSOT <sup>™</sup> -3
CoolFET <sup>™</sup>	FAST <sup>r</sup> <sup>™</sup>	MicroFET <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CROSSVOLT <sup>™</sup>	FRFET <sup>™</sup>	MicroPak <sup>™</sup>	QFET <sup>™</sup>	SuperSOT <sup>™</sup> -8
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## PRODUCT STATUS DEFINITIONS

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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