

2SK1375

T-29-25

2058

N-Channel Junction Silicon FET

Capacitor Microphone Applications

©3206

Features

- Very small-sized package permitting 2SK1375-applied sets to be made small and slim
- Especially suited for use in audio, telephone capacitor microphones
- Excellent voltage characteristic
- Excellent transient characteristic
- Adoption of FBET process

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Gate to Drain Voltage	V_{GDO}	-20	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Allowable Power Dissipation	P_D	100	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

		min	typ	max	unit
Gate to Drain	$V_{(BR)GDO}$ $I_G = -100\mu\text{A}$	-20			V
Breakdown Voltage					
Cutoff Voltage	$V_{GS(off)}$ $V_{DS}=5\text{V}, I_D=1\mu\text{A}$	-0.2	-0.6	-1.2	V
Drain Current	I_{DSS} $V_{DS}=5\text{V}, V_{GS}=0\text{V}$	140*		500*	mA
Forward Transfer Admittance	$ y_{fs} $ $V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{kHz}$	0.5	1.2		mS
Input Capacitance	C_{iss} $V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		3.5		pF
Reverse Transfer Capacitance	C_{rss} $V_{DS}=5\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		0.65		pF

* : The 2SK1375 is classified by drain current I_{DSS} as follows (unit : μA) :

140	21	240	210	22	350	320	23	500
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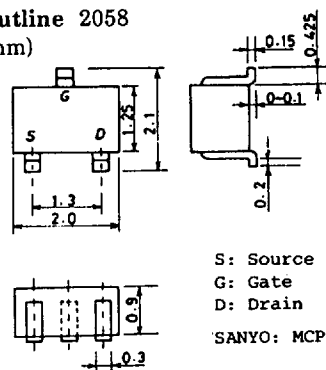
[$T_a = 25^\circ\text{C}, V_{CC} = 4.5\text{V}, R_L = 1\text{k}\Omega, C_{in} = 15\text{pF}$, See specified Test Circuit.]

			min	typ	max	unit
Voltage Gain	GV	$f=1\text{kHz}, V_{in}=10\text{mV}$	-3.0			dB
Reduced Voltage Characteristic	ΔG_V	$f=1\text{kHz}, V_{in}=10\text{mV}, V_{CC}=4.5 \rightarrow 1.5\text{V}$	-1.2	-3.5		dB
Frequency Characteristic	ΔG_{Vf}	$f=1\text{kHz to } 110\text{Hz}$			-1.0	dB
Input Impedance	Z_{in}	$f=1\text{kHz}$	25			$\text{M}\Omega$
Output Impedance	Z_o	$f=1\text{kHz}$			700	Ω
Total Harmonic Distortion	THD	$f=1\text{kHz}, V_{in}=30\text{mV}$		1.0		%
Output Noise Voltage	V_{NO}	$V_{in}=0, A \text{ curve}$			-110	dB

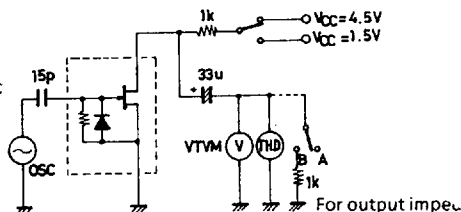
(Note) Marking : C

 I_{DSS} rank : 21, 22, 23

For CP package, use the 2SK595.

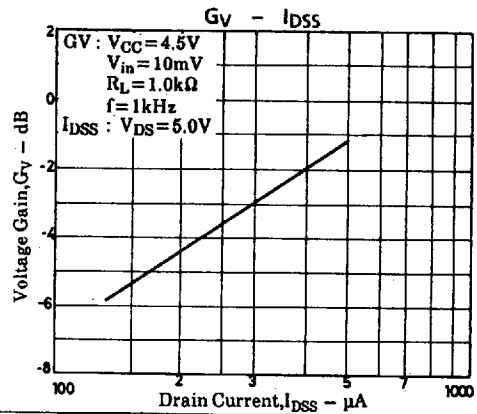
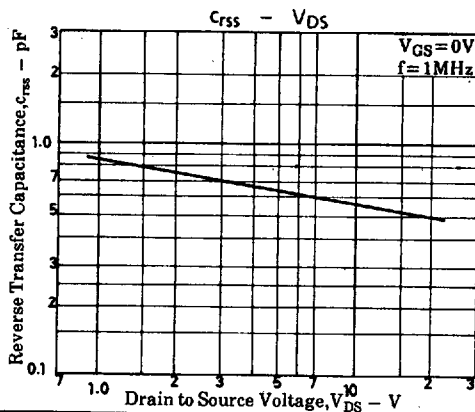
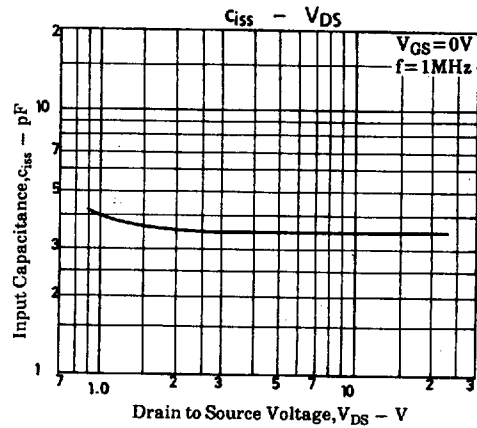
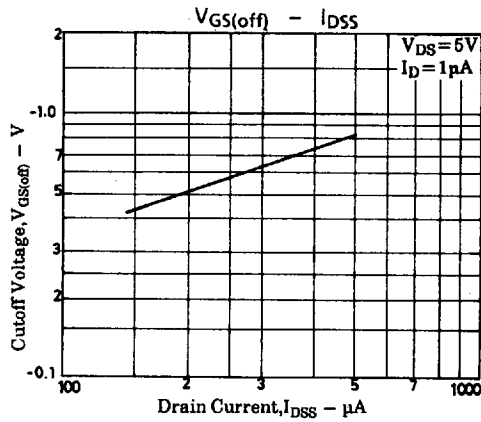
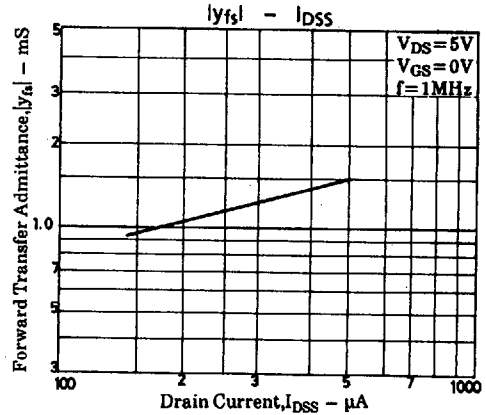
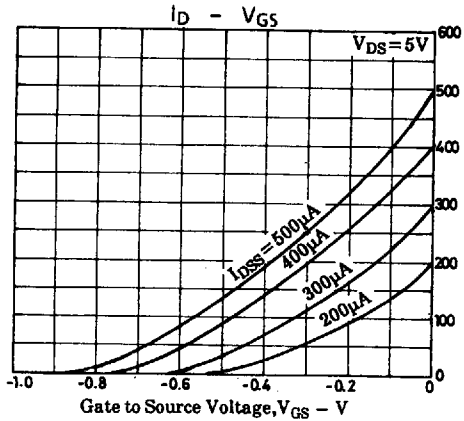
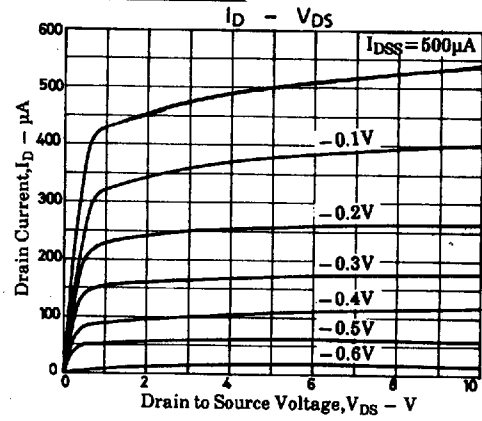
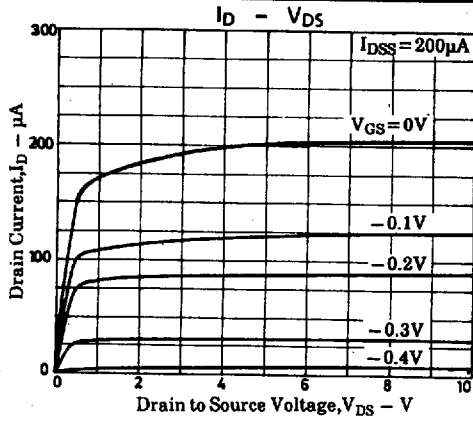
Case Outline 2058
(unit : mm)**Specified Test Circuit**

Voltage gain
Frequency characteristic
Distortion
Reduced voltage characteristic



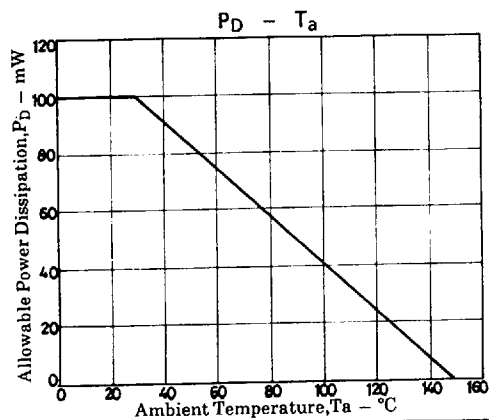
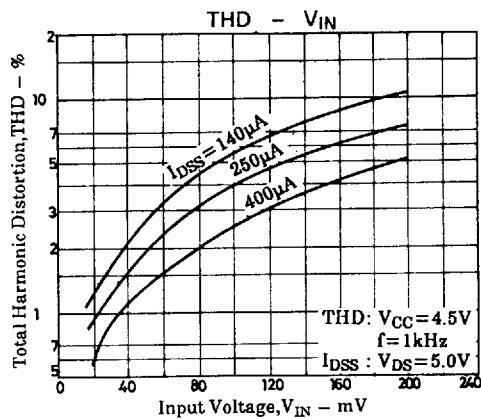
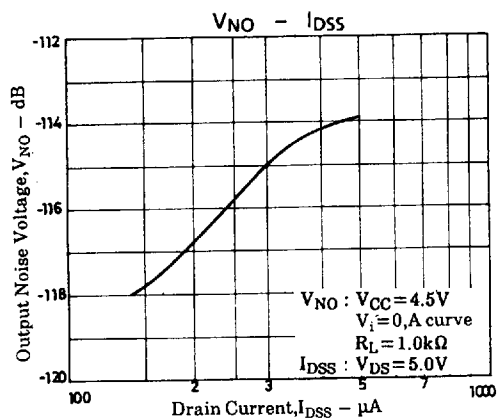
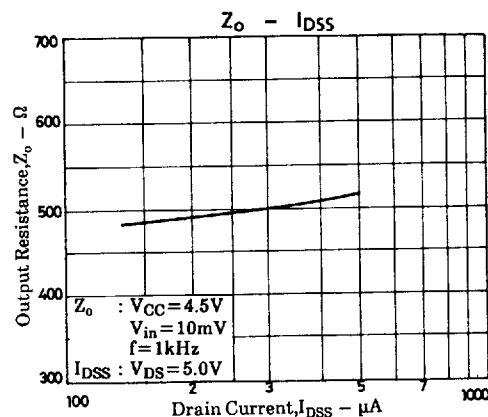
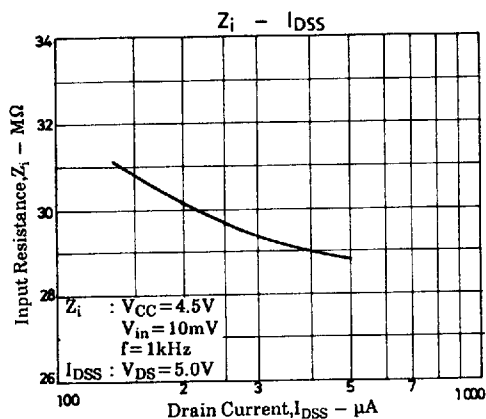
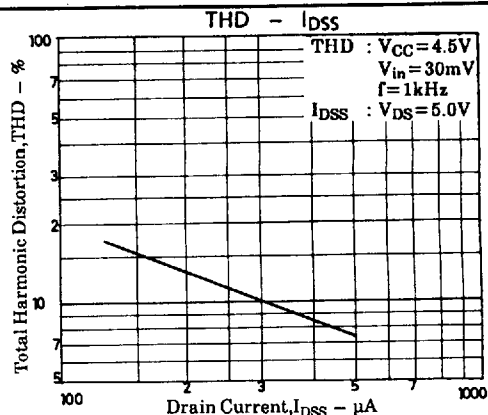
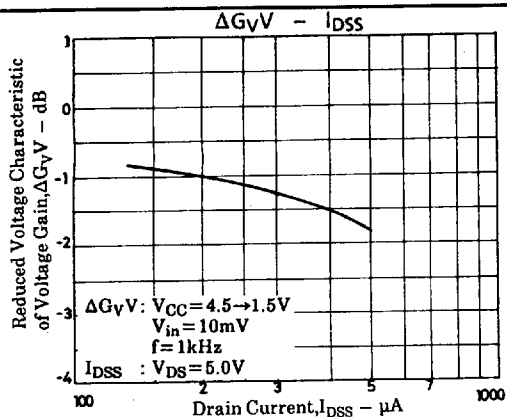
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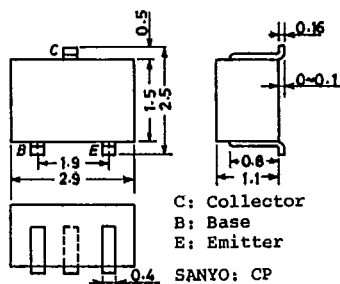


T-91-20

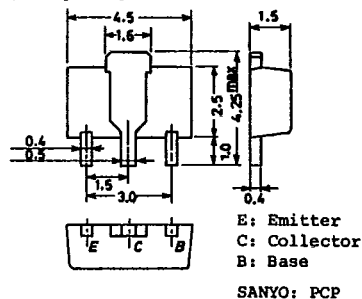
CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- All of Sanyo surface mount transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

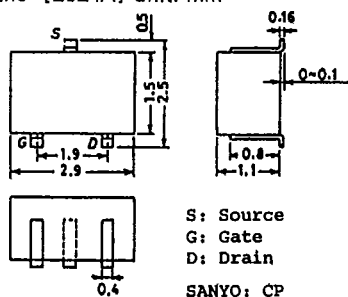
Case Outline—[2018A] unit: mm



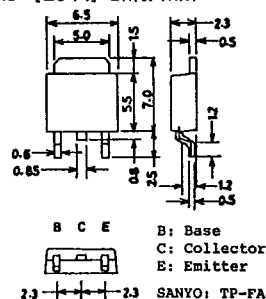
Case Outline—[2038] unit: mm



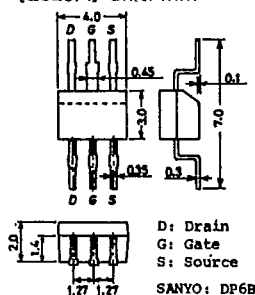
Case Outline—[2024A] unit: mm



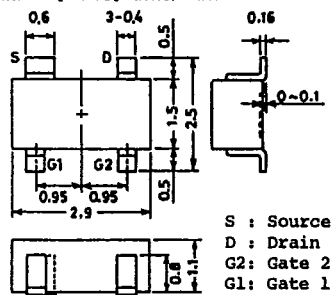
Case Outline—[2044] unit: mm



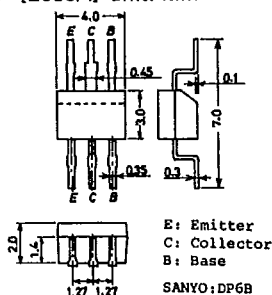
Case Outline—[2028A] unit: mm



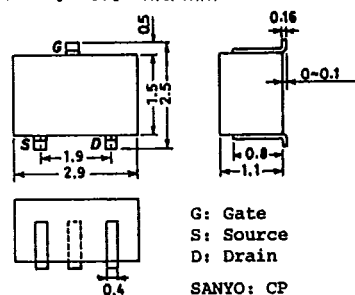
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

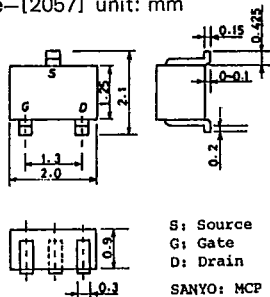


Case Outline—[2050] unit: mm

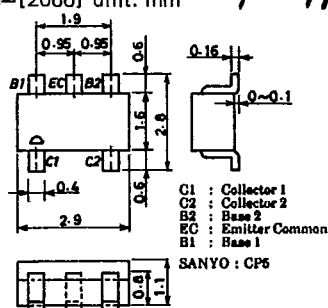


T-91-20

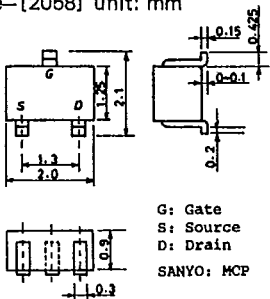
Case Outline—[2057] unit: mm



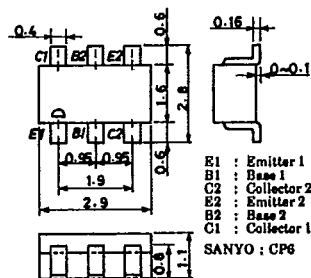
Case Outline—[2066] unit: mm



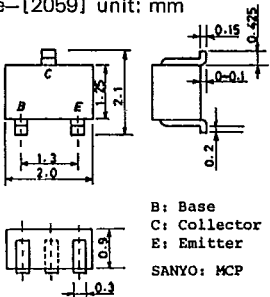
Case Outline—[2058] unit: mm



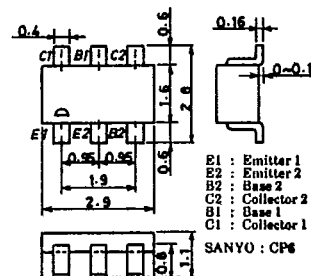
Case Outline—[2067] unit: mm



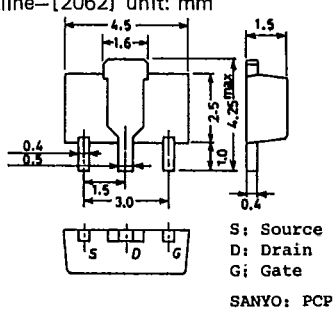
Case Outline—[2059] unit: mm



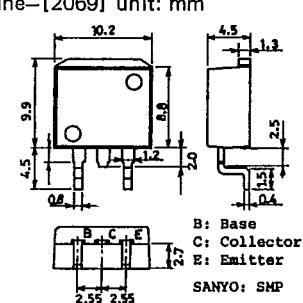
Case Outline—[2068] unit: mm



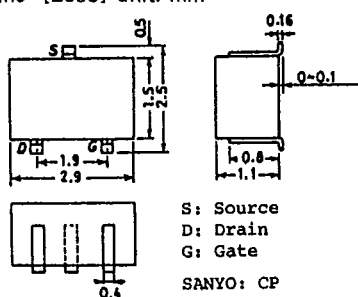
Case Outline—[2062] unit: mm



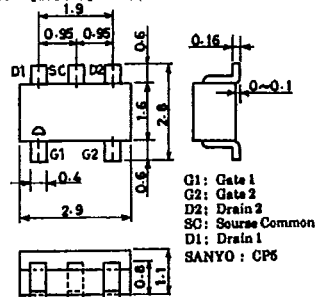
Case Outline—[2069] unit: mm



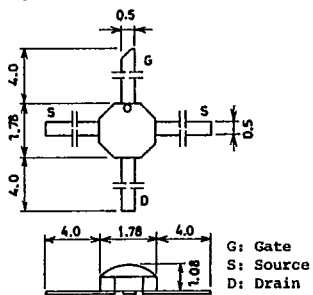
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

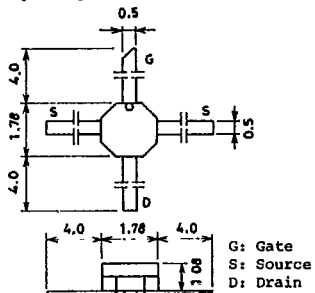


Case Outline-[2071] unit: mm



T-9120

Case Outline-[2072] unit: mm



Case Outline-[2073] unit: mm

