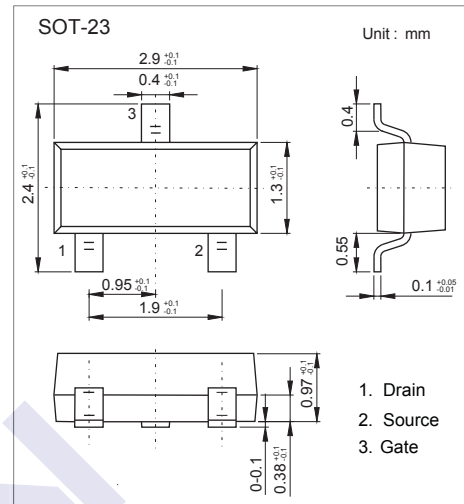
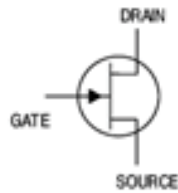


N-Channel Junction Silicon FET

2SK596

■ Features

- Excellent Voltage characteristic.
- Excellent transient characteristic.
- Adoption of FBET process.

■ Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Gate to Drain voltage	V_{DS}	-20	V
Gate current	I_G	10	mA
Drain current	I_D	1	
Total Power Dissipation	P_D	100	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate to Drain Breakdown Voltage	V_{GD0}	$I_G = -100\mu\text{A}$	-20			V
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5\text{V}, I_D = 1\mu\text{A}$		-0.6	-1.5	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	100		800	μA
Forward Transconductance	$ Y_{fs} $	$V_{DS} = 5\text{V}, V_{GS} = 0, f = 1.0\text{MHz}$	0.4	1.2		mS
Input Capacitance	C_{iss}	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}, f = 1.0\text{MHz}$		3.5		pF
Output Capacitance	C_{oss}			0.65		
Voltage Gain	G_v	$V_{in} = 10\text{mV}, f = 1\text{kHz}$		-3		dB
Reduced Voltage characteristic	ΔG_v	$V_{in} = 10\text{mV}, f = 1\text{kHz}, V_{CC} = 4.5\text{V to } 1.5\text{V}$		-1.2	-3.5	
Frequency characteristic	ΔG_{vF}	$f = 1\text{kHz to } 110\text{Hz}$			-1	
Input Resistance	Z_{in}	$f = 1\text{kHz}$	25			$\text{M}\Omega$
Output Resistance	Z_o	$f = 1\text{kHz}$			700	Ω
Total Harmonic Distortion	THD	$V_{in} = 30\text{mV}, f = 1\text{kHz}$	1			%
Output Noise Voltage	V_{NO}	$V_{in} = 0$			-110	dB

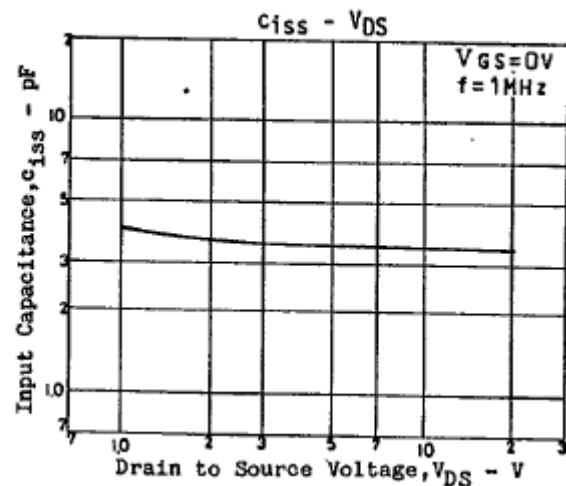
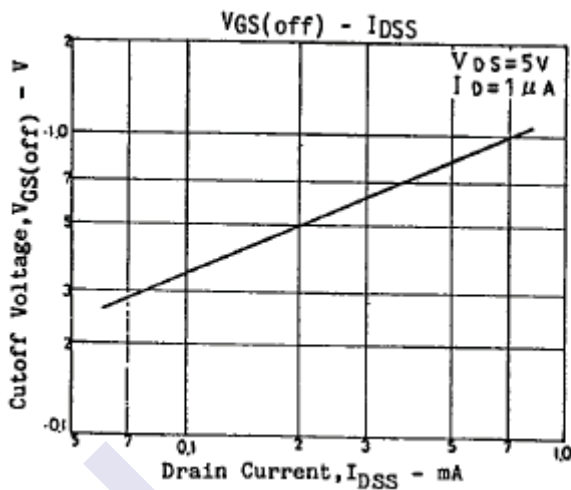
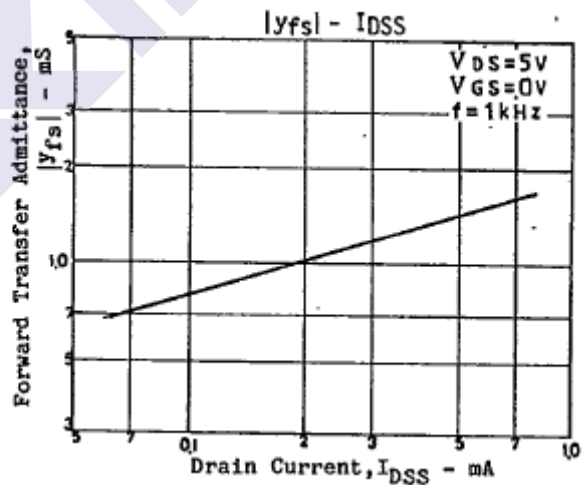
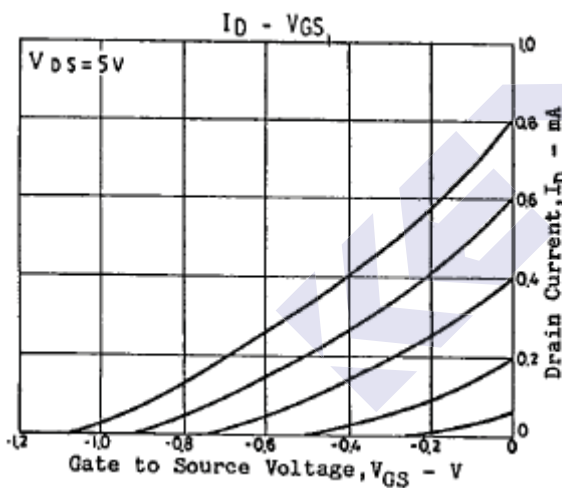
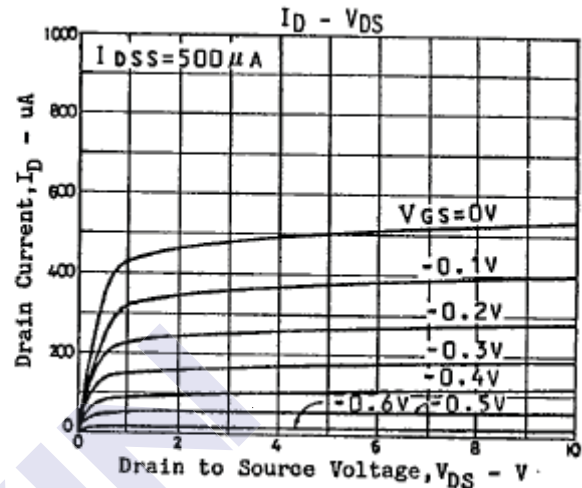
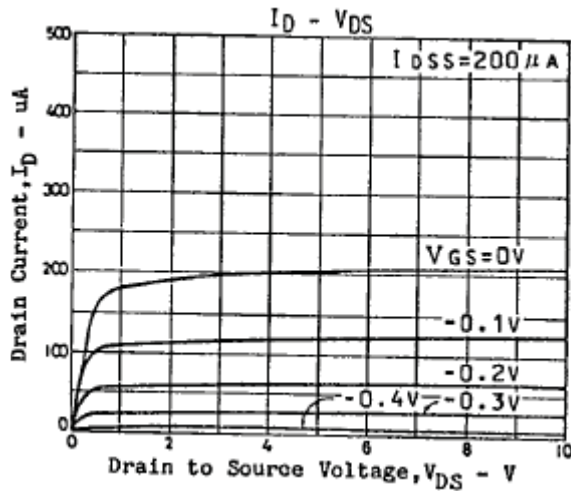
■ Classification of I_{DSS} (μA)

A	B	C	D	E
100-170	150-240	210-350	320-480	440-800
Marking: J35				

N-Channel Junction Silicon FET

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■ Typical Characteristics



N-Channel Junction Silicon FET

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