

SANYO

No.5202

2SK2218

N-Channel Junction Silicon FET

High-Frequency Low-Noise Amp
Applications**Features**

- Adoption of FBET process.
- Amateur radio equipment.
- UHF amplifiers, MIX, OSC, analog switches.
- Large $|Y_{fs}|$.
- Small Ciss.

Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V_{DSX}	15	V
Gate-to-Drain Voltage	V_{GDS}	-15	V
Gate Current	I_G	10	mA
Drain Current	I_D	100	mA
Allowable Power Dissipation	P_D	400	mW
		800	mW
Mounted on ceramic board (250mm ² × 0.8mm)			
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
G-D Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A, V_{DS} = 0$	-15			V
Gate Cutoff Current	I_{GSS}	$V_{GS} = -10V, V_{DS} = 0$			-1.0	nA
Gate-to-Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 100\mu A$	-1.2	-2.6	-4.5	V
Drain Current	I_{DSS}^*	$V_{DS} = 5V, V_{GS} = 0$	40*		75*	mA
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	24	32		mS
Input Capacitance	Ciss	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		5.5		pF
Reverse Transfer Capacitance	Crss	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		1.6		pF
Noise Figure	NF	$V_{DS} = 5V, R_g = 1k\Omega, I_D = 5mA$ $f = 1kHz$		1.3		dB
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 10mA, V_{GS} = 0$		30		Ω

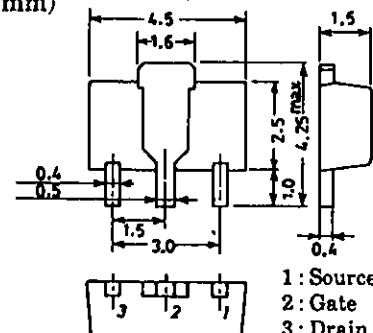
* : Pulse Test Pulse Width $\leq 2mS$ * : The 2SK2218 is classified by I_{DSS} as follows (unit : mA).

40	3	52	48	4	63	57	5	75
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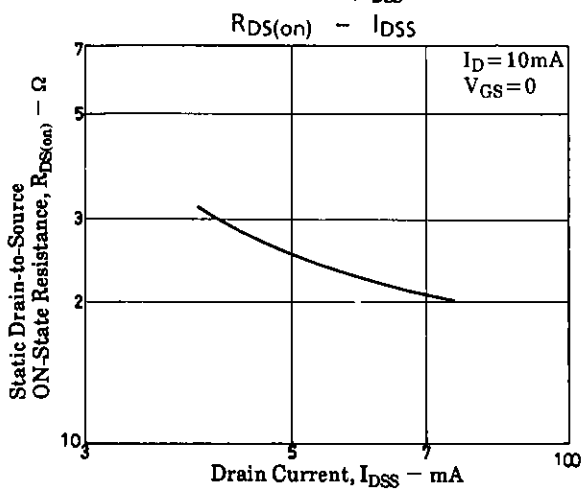
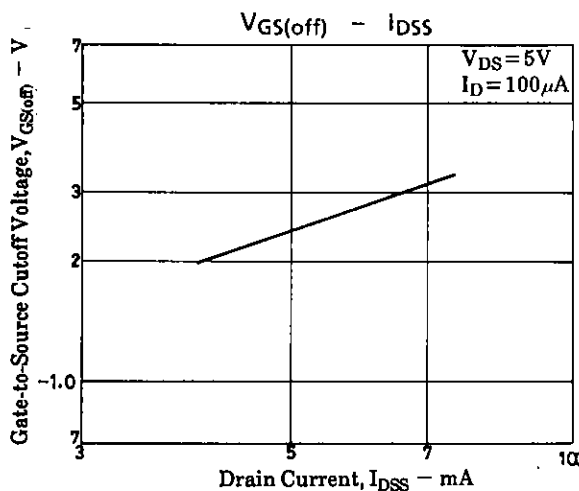
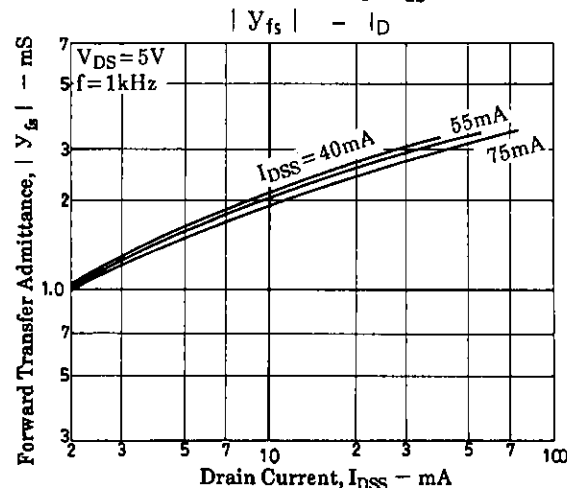
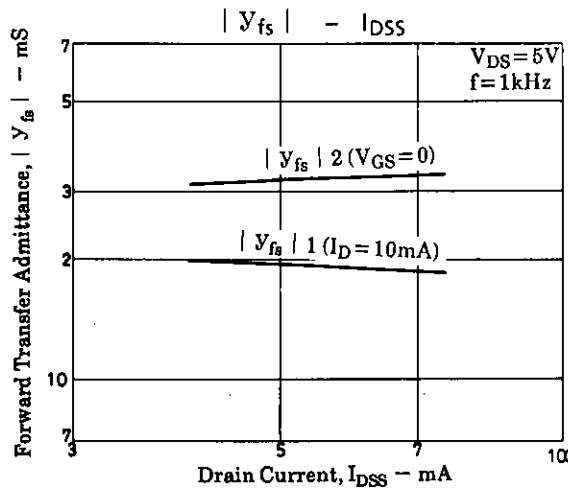
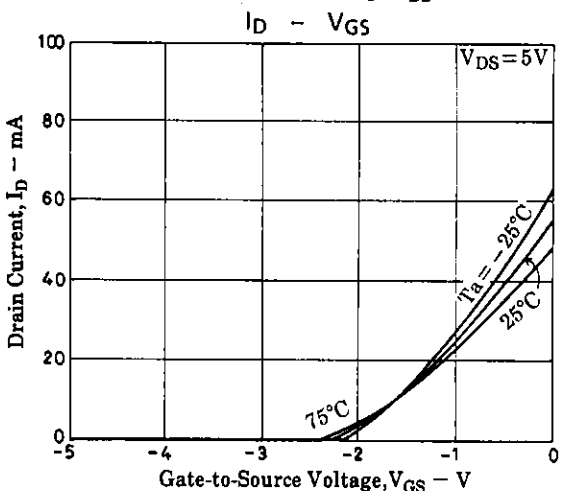
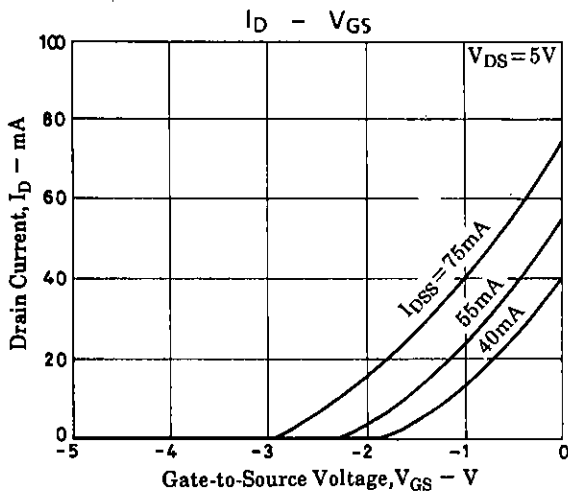
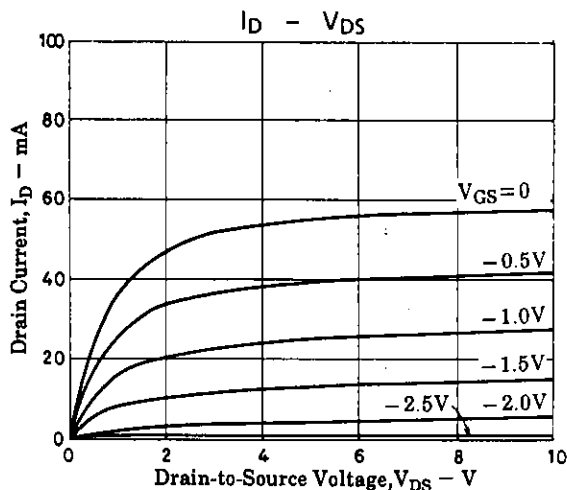
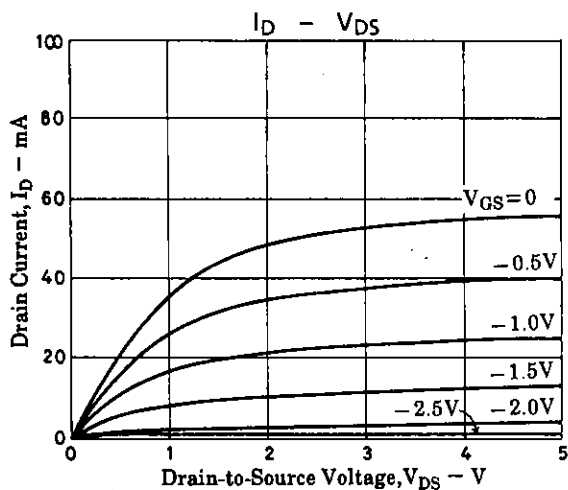
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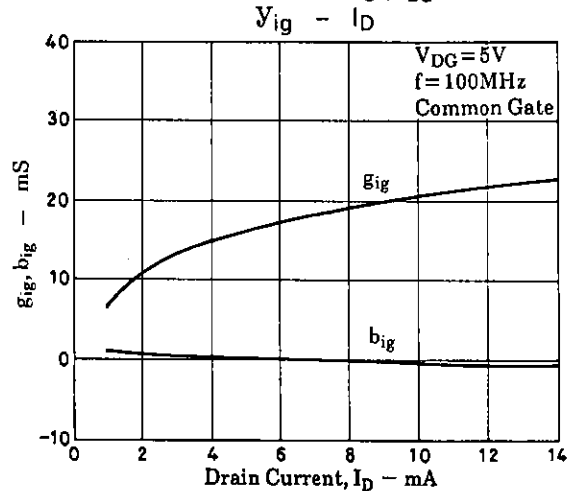
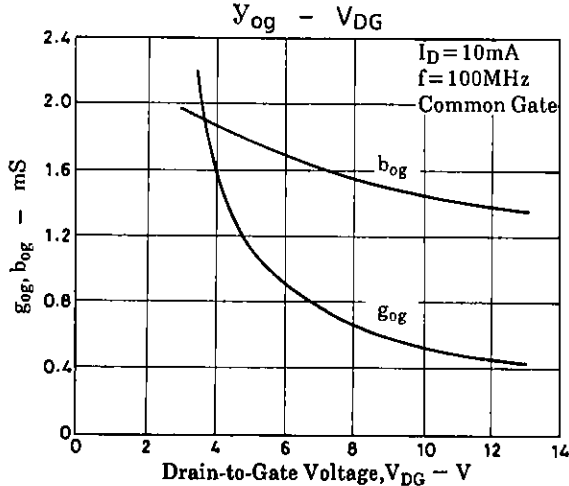
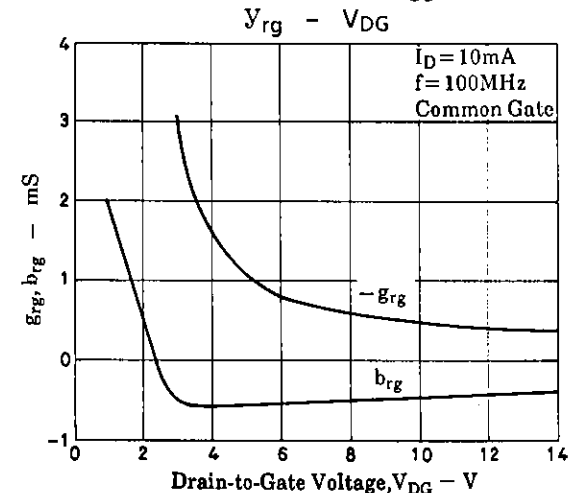
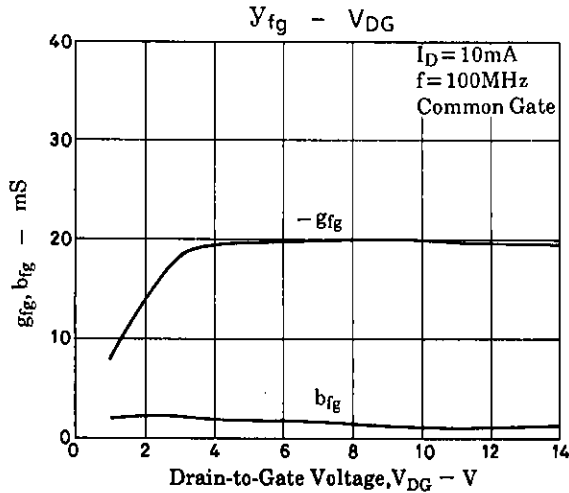
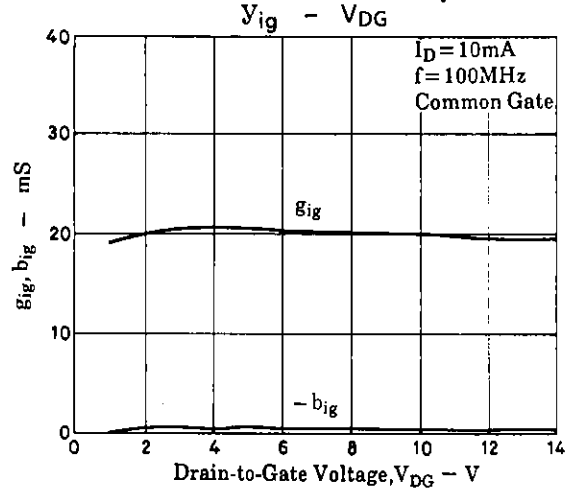
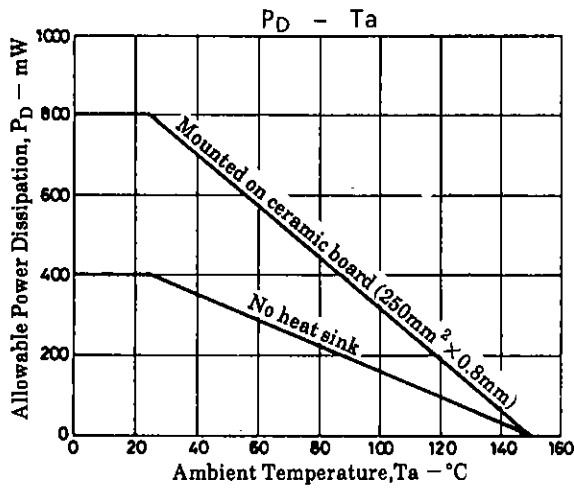
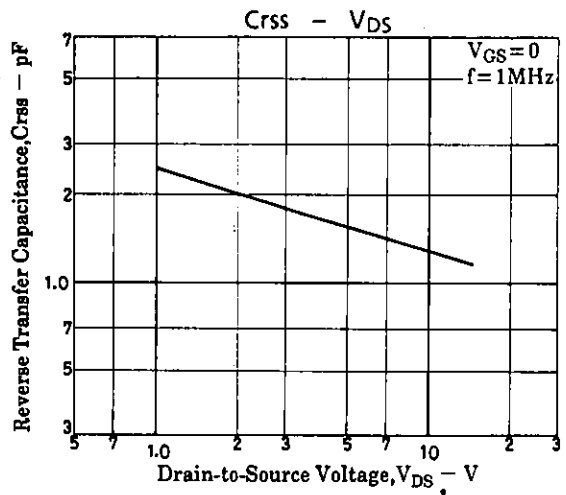
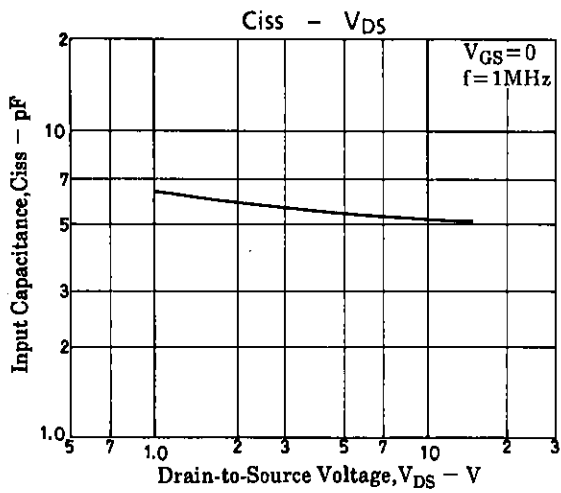
 I_{DSS} ranks : 3, 4, 5**Package Dimensions 2125**

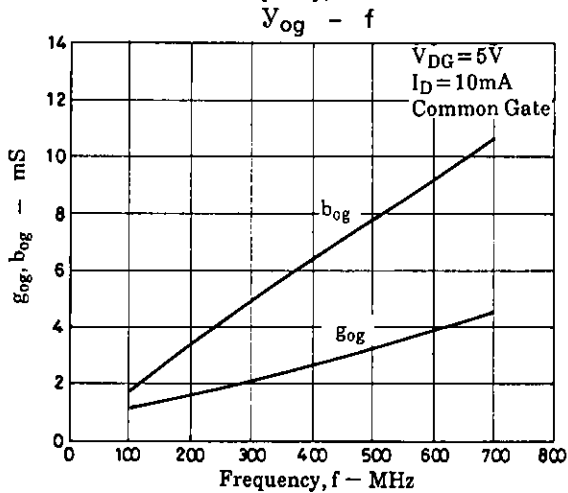
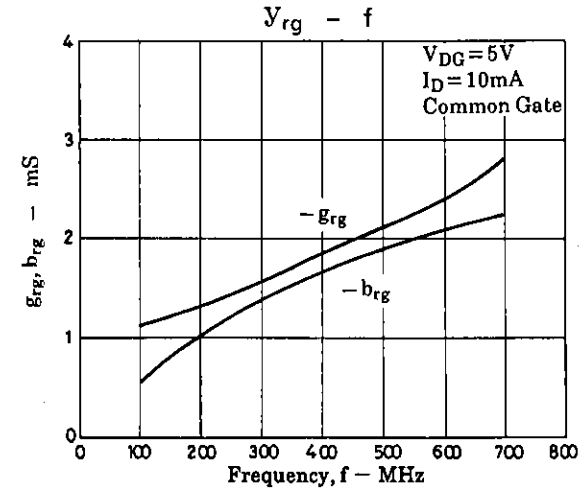
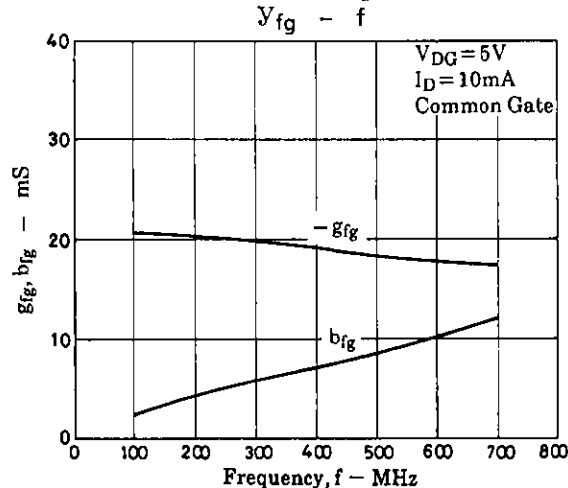
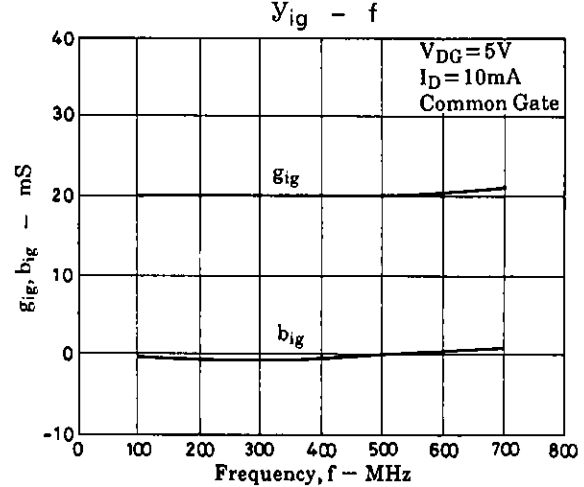
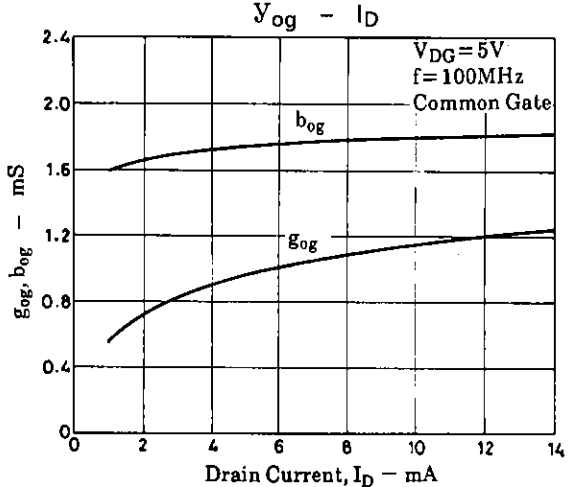
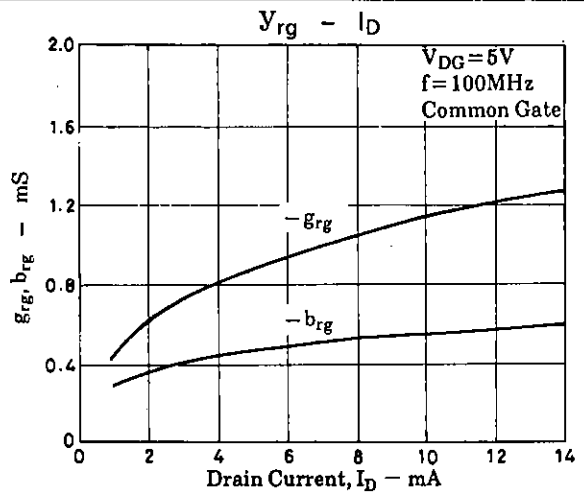
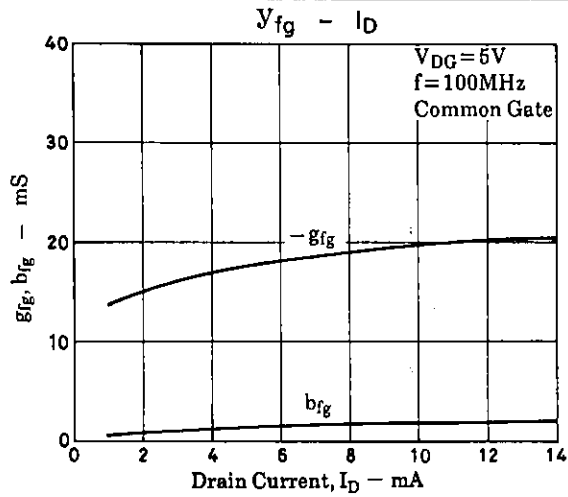
(unit : mm)

1: Source
2: Gate
3: DrainSANYO : PCP
(Bottom View)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

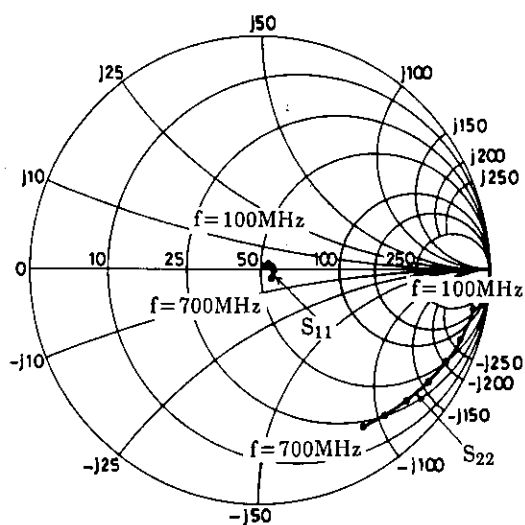
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN



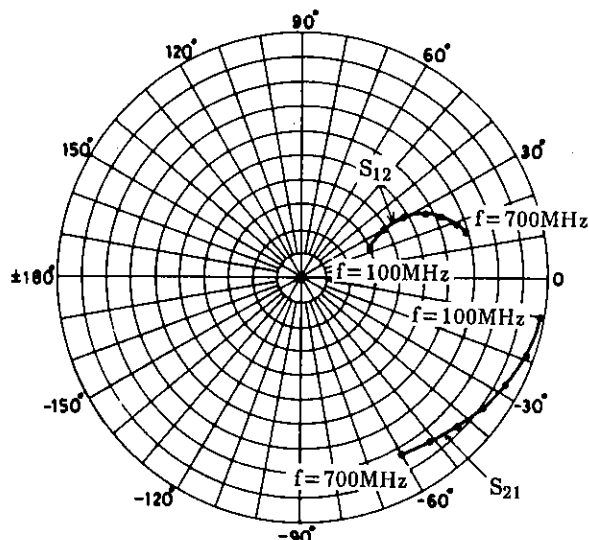




S Parameter Frequency Characteristics
(Common gate) ($V_{DG} = 5V, I_D = 10mA$)



S Parameter Frequency Characteristics
(Common gate) ($V_{DG} = 5V, I_D = 10mA$)



S Parameter (Common gate)

$V_{DG} = 5V, I_D = 10mA, Z_0 = 50\Omega$

Freq (MHz)	$ S_{11} $	$\angle S_{11}$	$ S_{21} $	$\angle S_{21}$	$ S_{12} $	$\angle S_{12}$	$ S_{22} $	$\angle S_{22}$
100	0.024	54.7	0.985	-9.7	0.059	21.9	0.942	-9.0
200	0.038	48.5	0.963	-18.8	0.078	30.1	0.918	-17.3
300	0.054	32.4	0.932	-27.3	0.097	30.2	0.896	-25.4
400	0.055	20.5	0.903	-35.4	0.113	27.3	0.870	-33.0
500	0.060	1.8	0.875	-43.6	0.124	23.4	0.847	-40.5
600	0.055	-19.1	0.849	-51.4	0.132	19.0	0.826	-48.2
700	0.053	-41.6	0.826	-60.1	0.137	15.0	0.811	-56.0

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