

SANYO	No.2129B	3SK180
		N-Channel Silicon MOS FET (Dual Gate) High-Frequency General-Purpose Amp Applications

Applications

- FM tuners and VHF tuners.

Features

- High power gain and low noise figure.
- High forward transfer admittance.

Absolute Maximum Ratings at Ta = 25°C

			unit
Drain-to-Source Voltage	V _{DS}	15	V
Gate1-to-Source Voltage	V _{G1S}	±7	V
Gate2-to-Source Voltage	V _{G2S}	±7	V
Drain Current	I _D	30	mA
Allowable Power Dissipation	P _D	200	mW
Channel Temperature	T _{ch}	125	°C
Storage Temperature	T _{stg}	-55 to +125	°C

Electrical Characteristics at Ta = 25°C

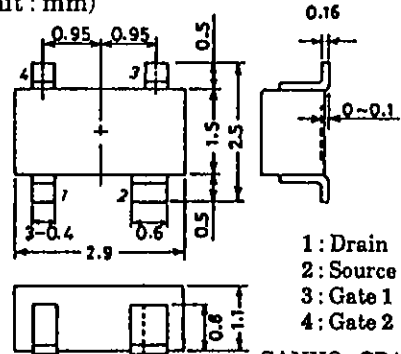
			min	typ	max	unit
Drain-to-Source Voltage	V _{DS}	V _{G1S} = -4V, V _{G2S} = 0V, I _{DS} = 100μA	15			V
G1-S Breakdown Voltage	V _{(BR)G1SS}	I _{G1} = 10μA, V _{DS} = 0, V _{G2S} = 0V	±7			V
G2-S Breakdown Voltage	V _{(BR)G2SS}	I _{G2} = 10μA, V _{DS} = 0, V _{G1S} = 0V	±7			V
Gate1-to-Source Cutoff Voltage	V _{G1S(off)}	V _{DS} = 10V, V _{G2S} = 4V, I _D = 100μA			-3	V
Gate2-to-Source Cutoff Voltage	V _{G2S(off)}	V _{DS} = 10V, V _{G1S} = 0V, I _D = 100μA			-2.5	V
Gate1 Cutoff Current	I _{G1SS}	V _{G1S} = ±5V, V _{G2S} = V _{DS} = 0V			±50	nA
Gate2 Cutoff Current	I _{G2SS}	V _{G2S} = ±5V, V _{G1S} = V _{DS} = 0V			±50	nA
Drain Current	I _{DSS}	V _{DS} = 10V, V _{G1S} = 0, V _{G2S} = 4V	2.5※		24※	mA
Forward Transfer Admittance	Y _{fs}	f = 1kHz, I _D = 10mA, V _{DS} = 10V, V _{G2S} = 4V		20		mS
Input Capacitance	C _{iss}	V _{DS} = 10V, f = 1MHz		3.0		pF
Reverse Transfer Capacitance	C _{rss}	V _{G1S} = 0V, V _{G2S} = 4V		0.02	0.05	pF
Power Gain	PG	V _{DS} = 10V, I _D = 10mA	22	28		dB
Noise Figure	NF	f = 100MHz, V _{G2S} = 4V		1.8	3.0	dB

※ : The 3SK180 is classified by I_{DSS} as follows : (unit : mA)

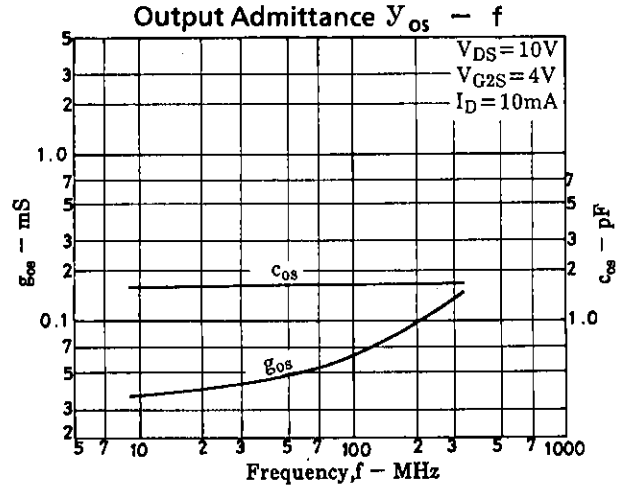
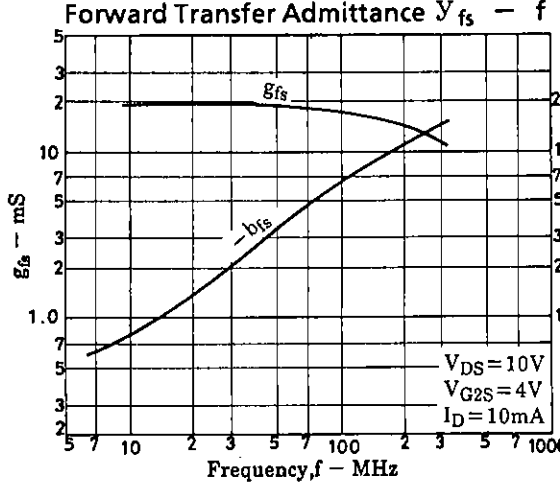
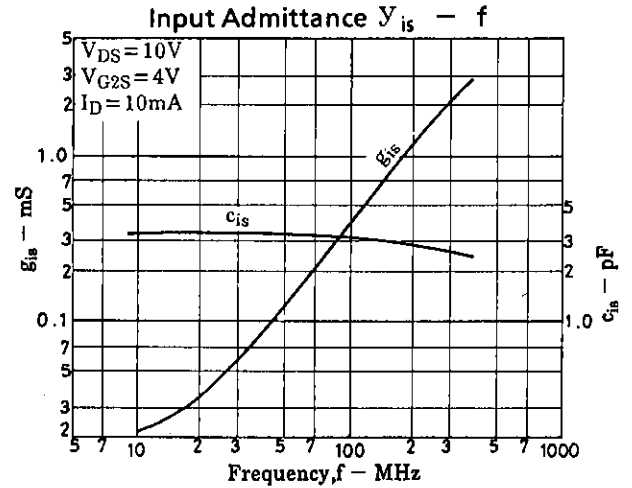
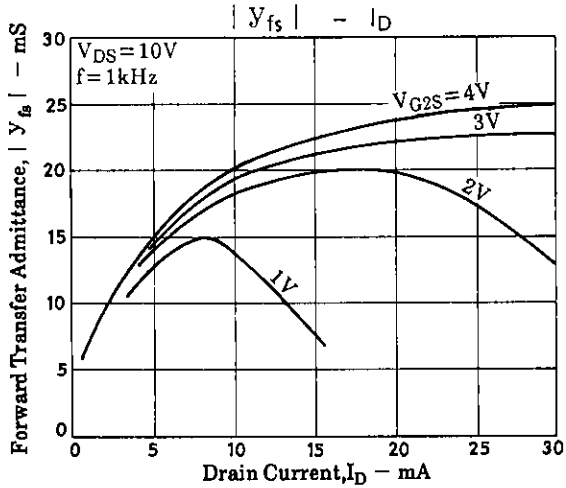
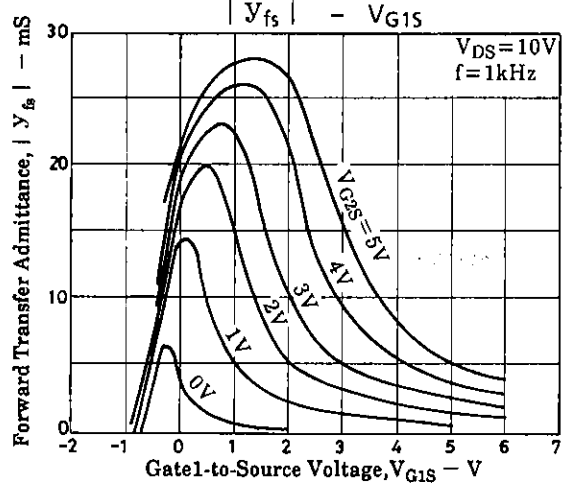
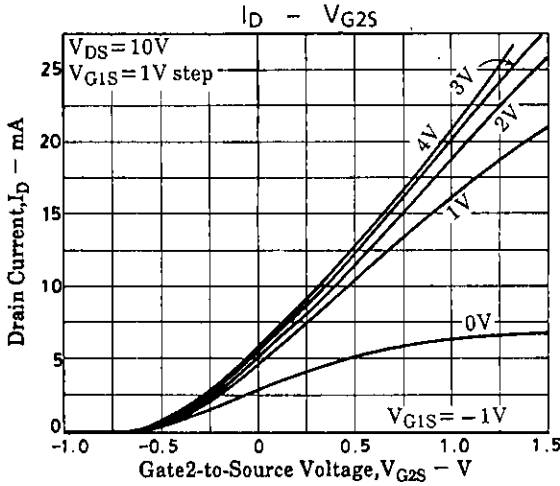
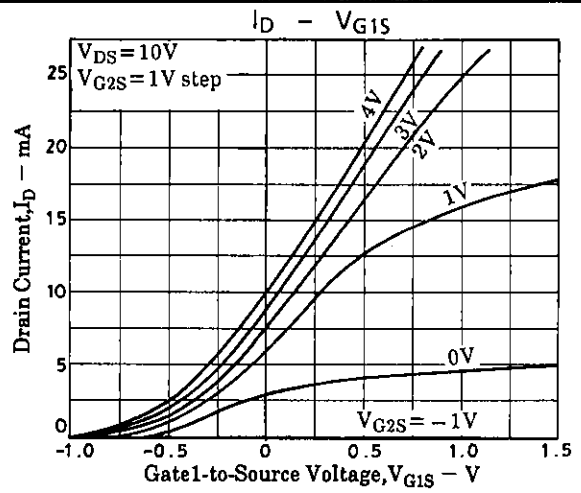
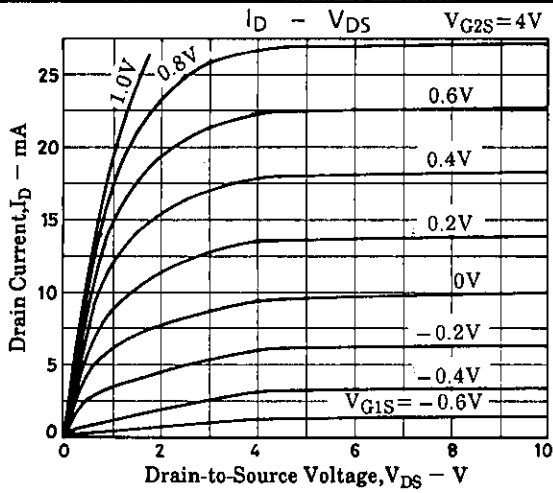
2.5	4	6.0	5.0	5	12.0	10.0	6	24.0
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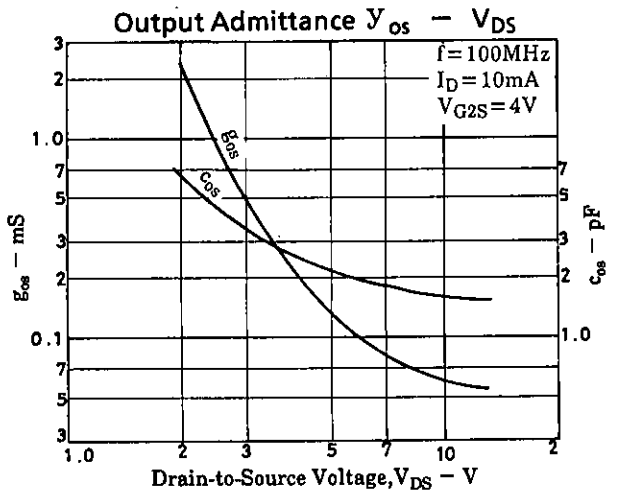
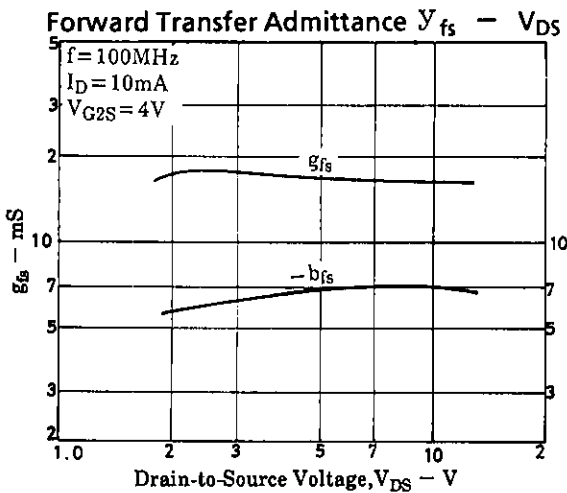
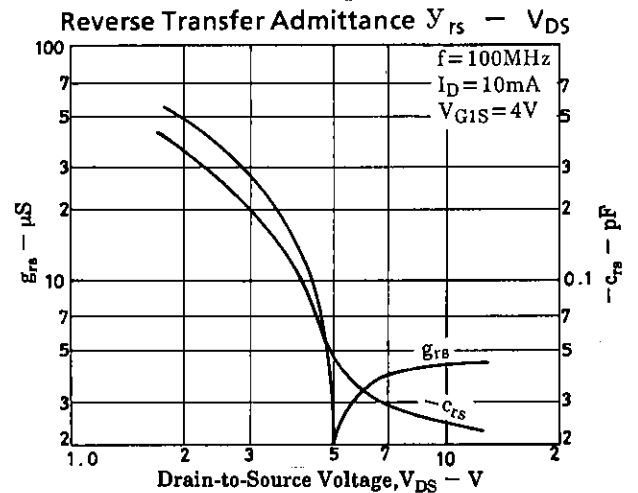
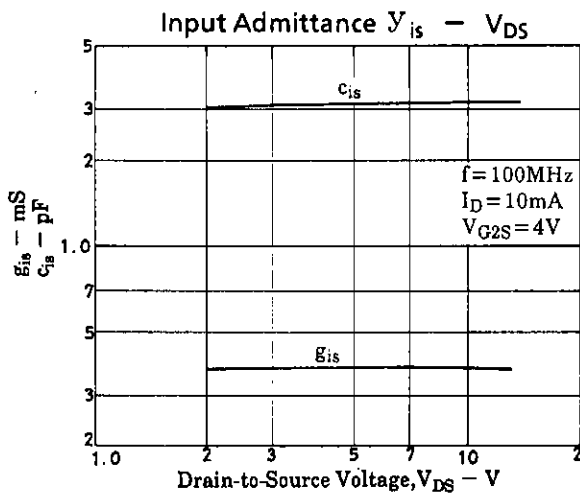
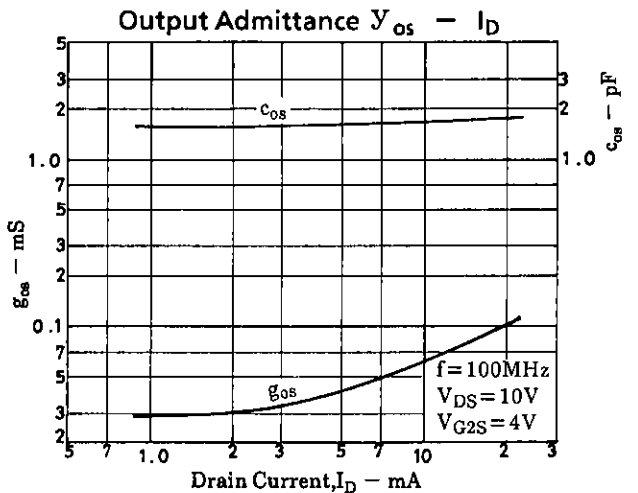
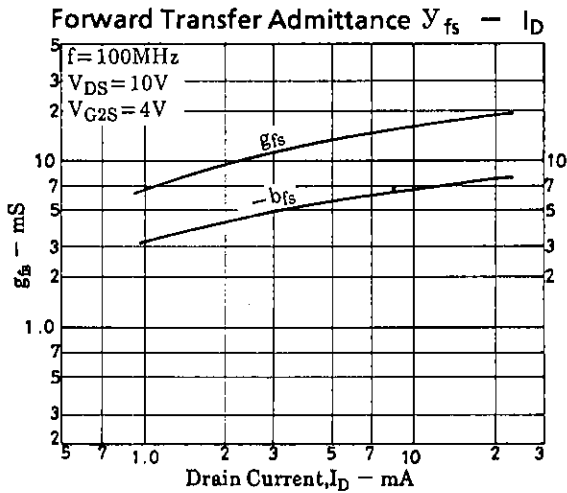
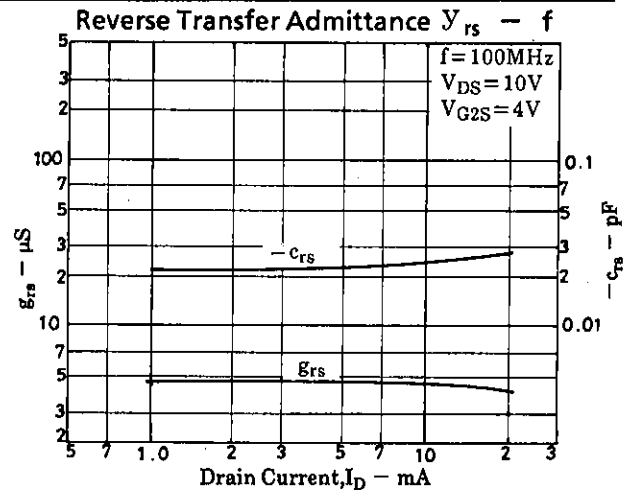
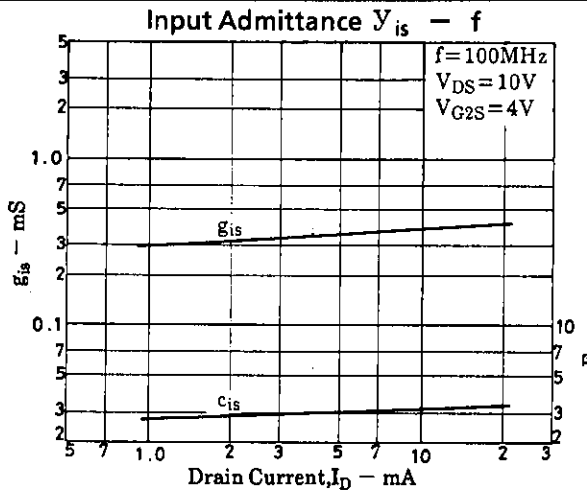
Marking : DJ
I_{DSS} rank : 4, 5, 6

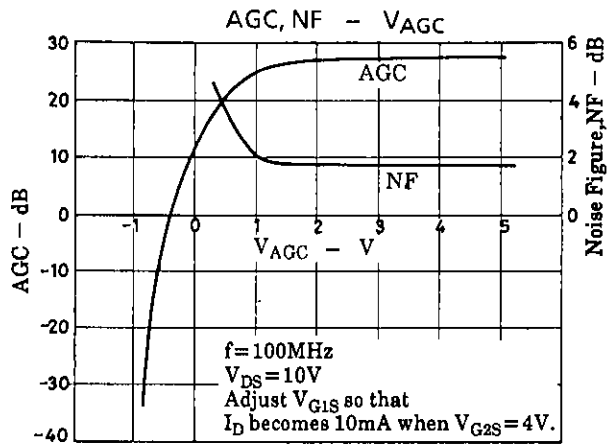
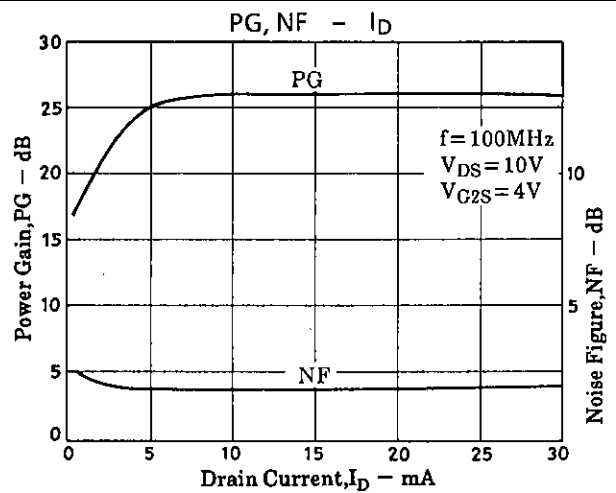
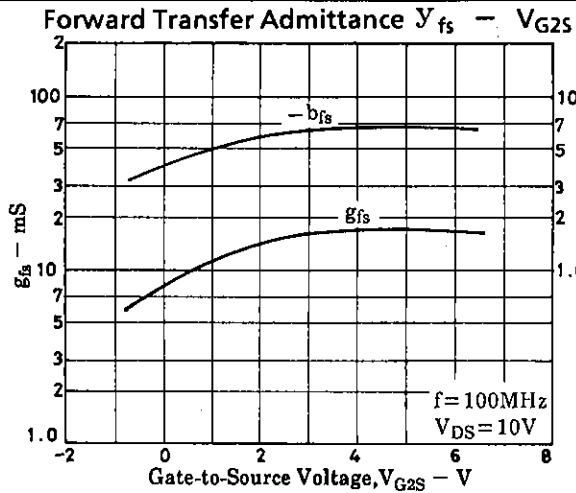
Package Dimensions 2046A
(unit : mm)



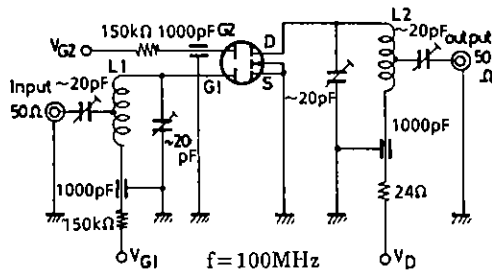
SANYO : CP4







PG, NF Test Circuit



- L1: 1mmϕ plated wire 10mmϕ 4T, tap: 1T from gate side
- L2: 1mmϕ plated wire 10mmϕ 6T, tap: 1T from drain side

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