

To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

Send any inquiries to <http://www.renesas.com/inquiry>.

Not recommended
for new design

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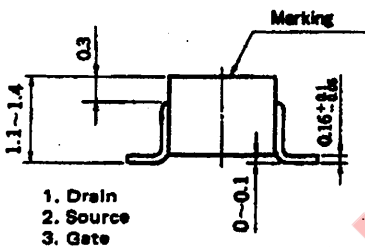
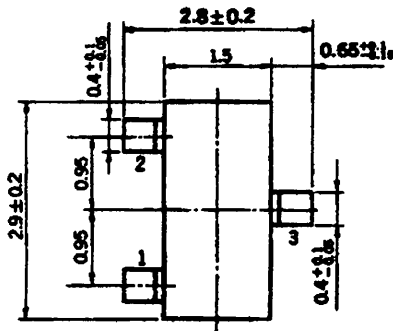
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JUNCTION FIELD EFFECT TRANSISTOR 2SK520

HIGH FREQUENCY AMPLIFIER N-CHANNEL SILICON JUNCTION FIELD EFFECT TRANSISTOR MINI MOLD

PACKAGE DIMENSIONS

In millimeters



1. Drain
2. Source
3. Gate

FEATURES

- Good for AM Radio Application
- High $|y_{fs}|$ $|y_{fe}| = 17$ mS TYP.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)

Gate to Drain Voltage	V_{GDO}	-30	V
Gate to Source Voltage	V_{GSO}	-30	V
Drain to Source Voltage ($V_{GS} = -10$ V)	V_{DSX}	30	V
Drain Current (DC)	I_D	50	mA
Gate Current (DC)	I_G	10	mA

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature	P_T	200	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

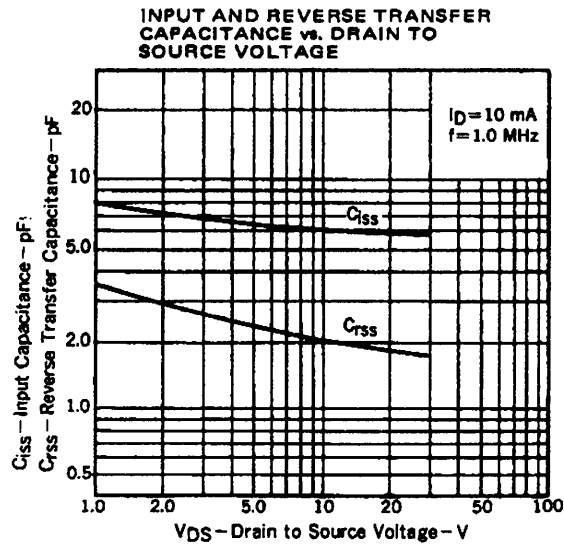
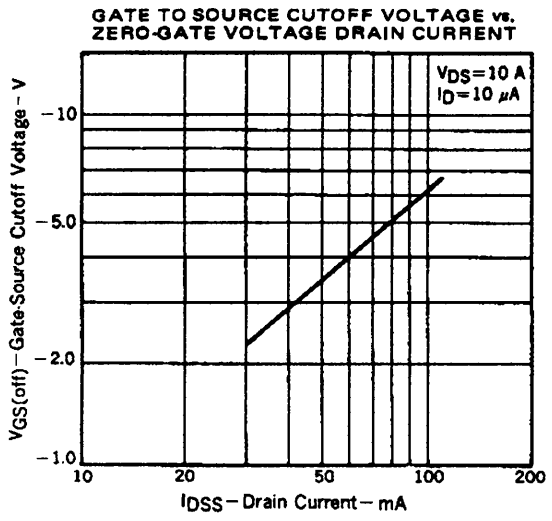
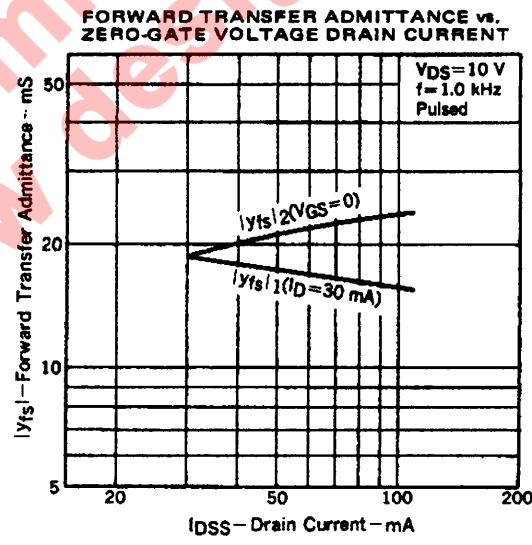
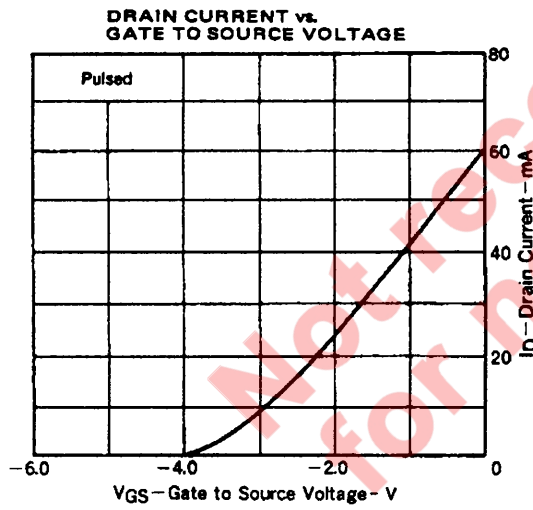
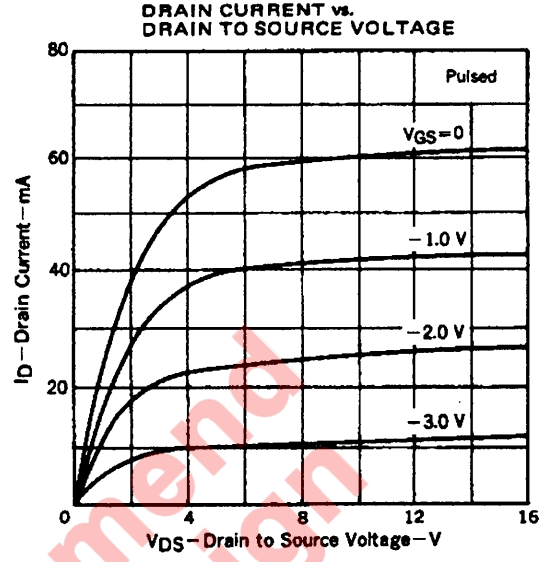
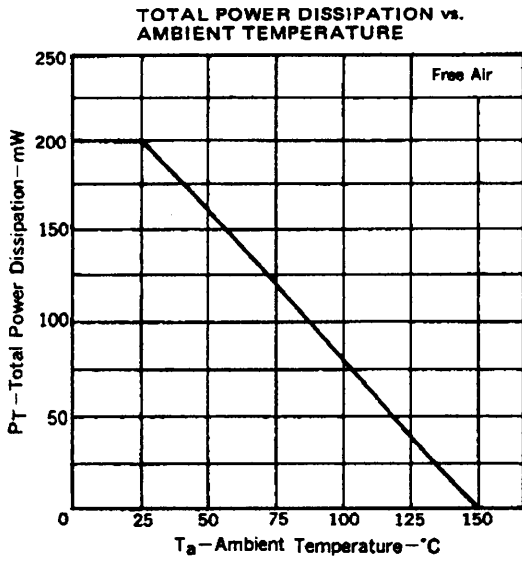
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Gate Cutoff Current	I_{GSS}			-1.0	nA	$V_{GS} = -20$ V, $V_{DS} = 0$
Zero-Gate Voltage Drain Current	I_{DSS}^*	30	60	110	mA	$V_{DS} = 10$ V, $V_{GS} = 0$
Gate to Source Cutoff Voltage	$V_{GS(off)}$	-1.5	-4.0	-9.0	V	$V_{DS} = 10$ V, $I_D = 10$ μA
Forward Transfer Admittance	$ y_{fs} ^*$		17		mS	$V_{DS} = 10$ V, $I_D = 30$ mA, $f = 1.0$ kHz
Forward Transfer Admittance	$ y_{fs} _2^*$		22		mS	$V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1.0$ kHz
Input Capacitance	C_{iss}		6.0		pF	$V_{DS} = 10$ V, $I_D = 10$ mA, $f = 1.0$ MHz
Feedback Capacitance	C_{rss}		2.0		pF	$V_{DS} = 10$ V, $I_D = 10$ mA, $f = 1.0$ MHz

* Pulsed PW ≤ 1 ms, Duty Cycle ≤ 1 %

I_{DSS} Classification

Marking	K41	K42	K43	K44	K45
I_{DSS} (mA)	30 to 50	45 to 65	60 to 80	75 to 95	90 to 110

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)





**Not recommend
for new design**

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for new design

NEC Corporation

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