

To our customers,

Old Company Name in Catalogs and Other Documents

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

April 1st, 2010
Renesas Electronics Corporation

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

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EOL announced Product

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MOS FIELD EFFECT TRANSISTOR

2SJ463A

P-CHANNEL MOS FIELD EFFECT TRANSISTOR FOR HIGH SPEED SWITCHING

DESCRIPTION

The 2SJ463A is a switching device which can be driven directly by a 2.5 V power source.

The 2SJ463A has excellent switching characteristics, and is suitable for use as a high-speed switching device in digital circuits.

FEATURES

- Can be driven by a 2.5 V power source
- Low gate cut-off voltage

★ ORDERING INFORMATION

PART NUMBER	PACKAGE
2SJ463A	SC-70 (SSP)

Marking: H21

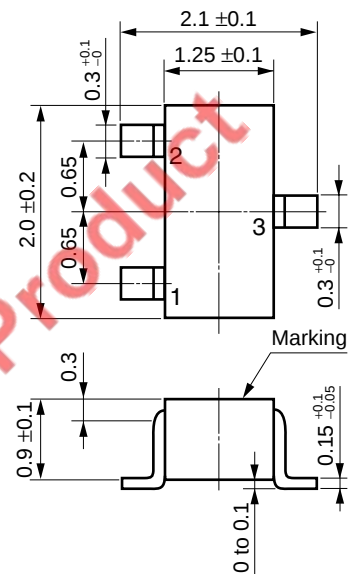
ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Drain to Source Voltage (V _{GS} = 0 V)	V _{DSS}	-30	V
Gate to Source Voltage (V _{DS} = 0 V)	V _{GSS}	±20	V
Drain Current (DC)	I _{D(DC)}	±0.1	A
Drain Current (pulse) ^{Note}	I _{D(pulse)}	±0.4	A
Total Power Dissipation	P _T	150	mW
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

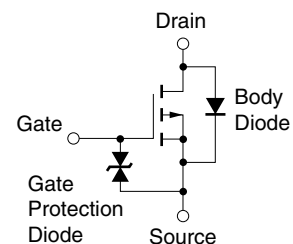
Note PW ≤ 10 μs, Duty Cycle ≤ 1%

Remark The diode connected between the gate and source of the transistor serves as a protector against ESD. When this device actually used, an additional protection circuit is externally required if a voltage exceeding the rated voltage may be applied to this device.

★ PACKAGE DRAWING (Unit: mm)



EQUIVALENT CIRCUIT

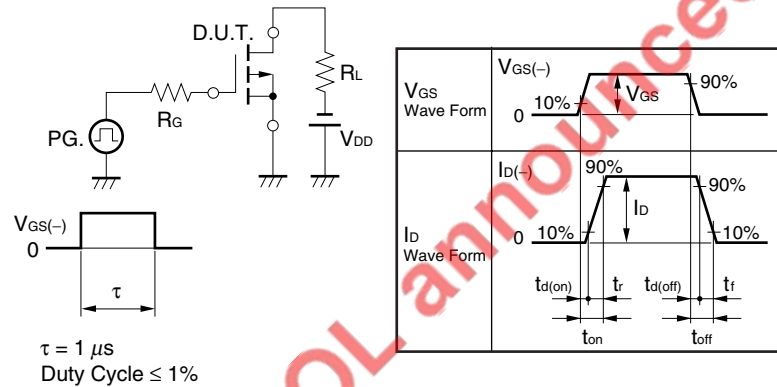


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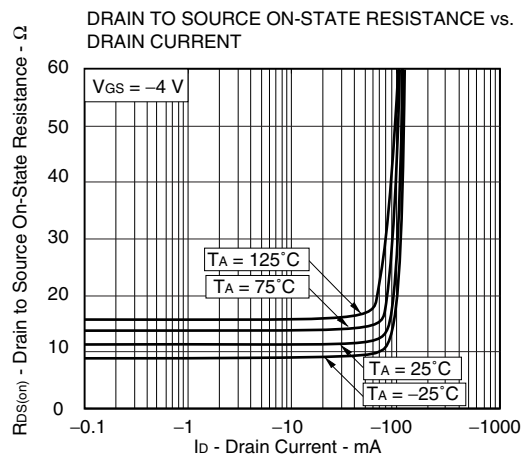
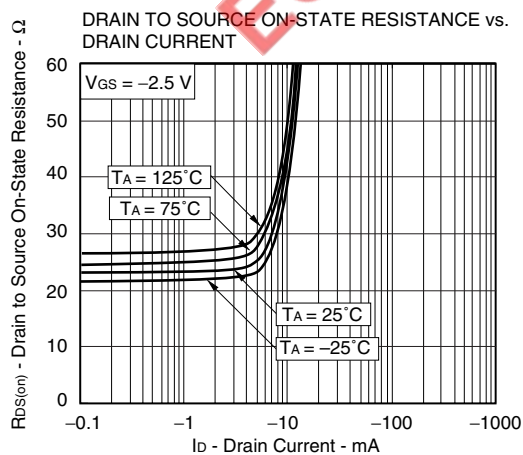
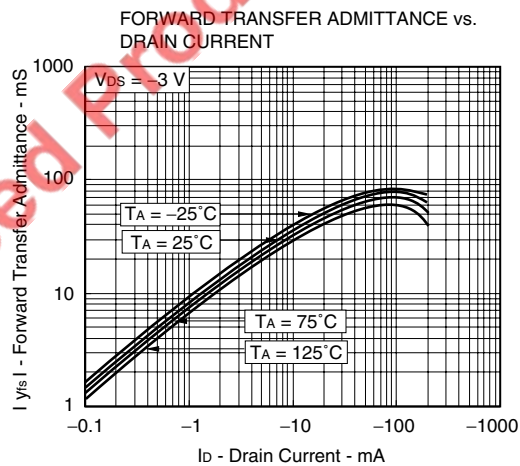
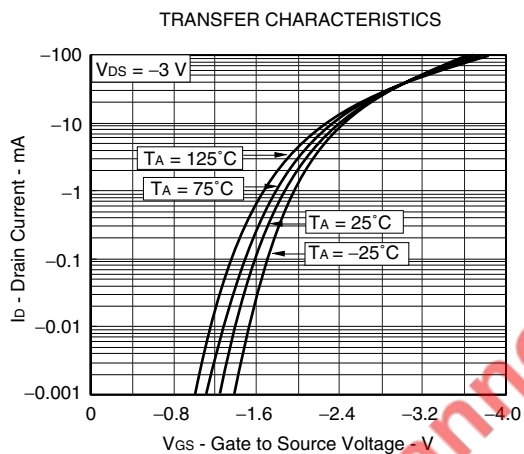
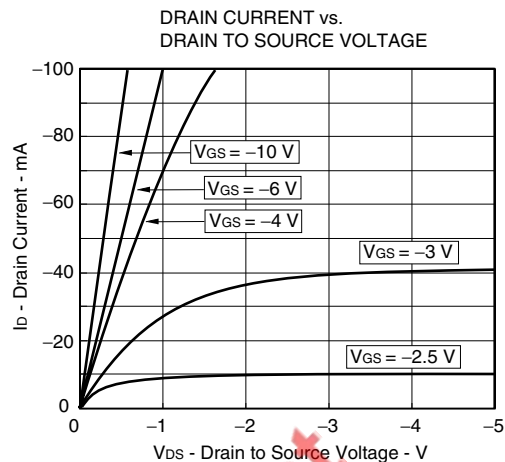
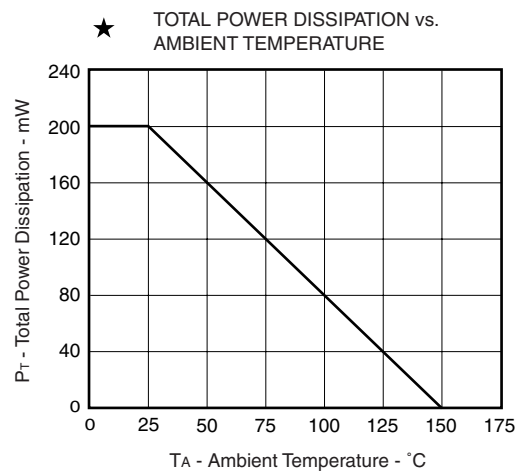
ELECTRICAL CHARACTERISTICS (T_A = 25°C)

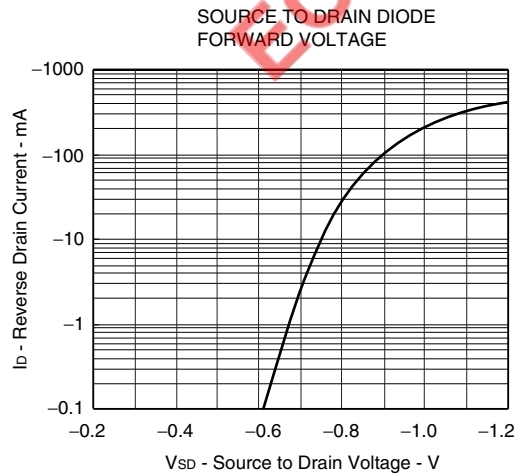
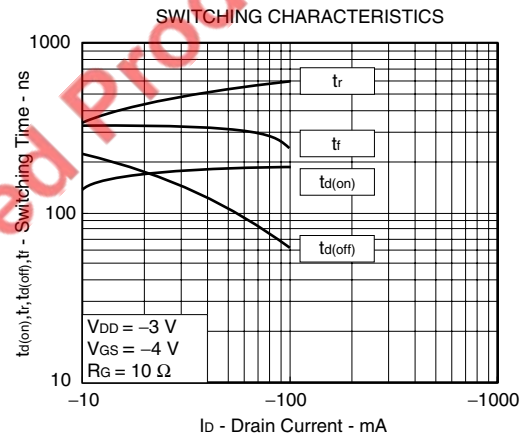
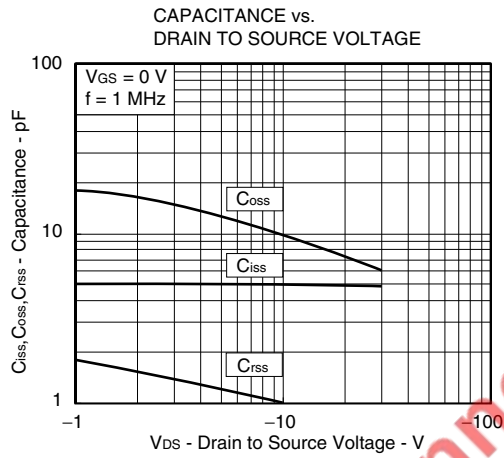
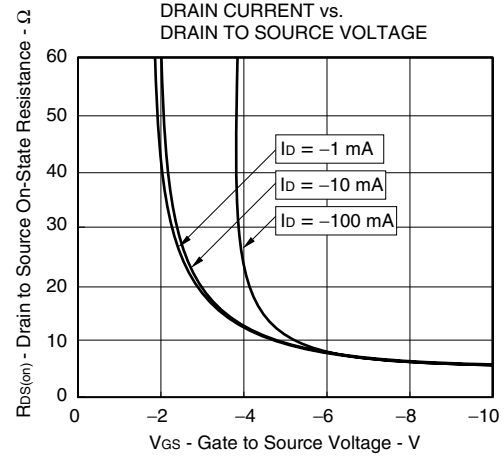
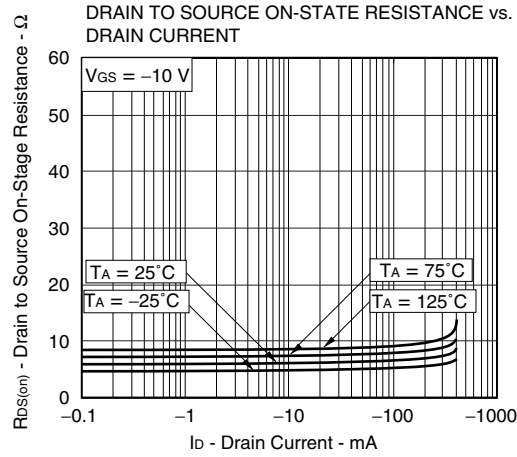
CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30 V, V _{GS} = 0 V			-1	μA
Gate Leakage Current	I _{GSS}	V _{GS} = ±20 V, V _{DS} = 0 V			±10	μA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = -3 V, I _D = -10 μA	-1.0	-1.4	-1.7	V
Forward Transfer Admittance	y _{fs}	V _{DS} = -3 V, I _D = -10 mA	20			mS
Drain to Source On-state Resistance	R _{DS(on)1}	V _{GS} = -2.5 V, I _D = -1 mA		23	60	Ω
	R _{DS(on)2}	V _{GS} = -4 V, I _D = -10 mA		11	23	Ω
	R _{DS(on)3}	V _{GS} = -10 V, I _D = -10 mA		6	13	Ω
Input Capacitance	C _{iss}	V _{DS} = -3 V		5		pF
Output Capacitance	C _{oss}	V _{GS} = 0 V		15		pF
Reverse Transfer Capacitance	C _{rss}	f = 1 MHz		1.3		pF
Turn-on Delay Time	t _{d(on)}	V _{DD} = -3 V, I _D = -10 mA		140		ns
Rise Time	t _r	V _{GS} = -4 V		330		ns
Turn-off Delay Time	t _{d(off)}	R _G = 10 Ω, R _L = 300 Ω		220		ns
Fall Time	t _f			320		ns

★ **TEST CIRCUIT SWITCHING TIME**



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





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