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)

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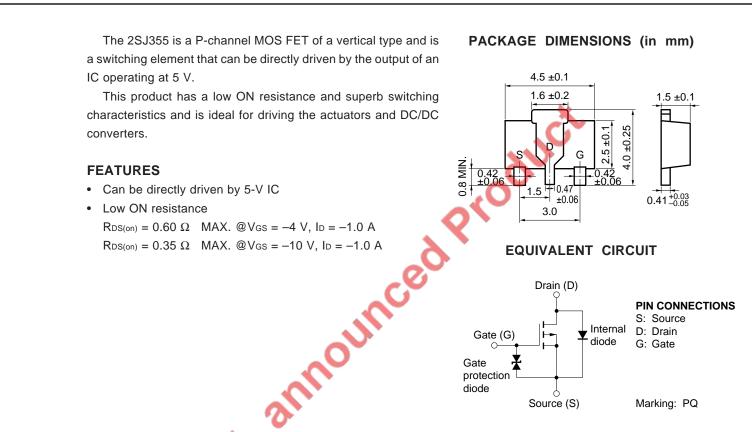
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RENESAS

MOS FIELD EFFECT TRANSISTOR 2SJ355

P-CHANNEL MOS FET FOR HIGH SWITCHING



ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

PARAMETER	SYMBOL	TEST CONDITIONS	RATING	UNIT
Drain to Source Voltage	Vdss	V _{GS} = 0	-30	V
Gate to Source Voltage	Vgss	V _{DS} = 0	-20/+10	V
Drain Current (DC)	ID(DC)		±2.0	А
Drain Current (Pulse)	D(pulse)	PW ≤ 10 ms	±4.0	А
		Duty cycle ≤ 1 %		
Total Power Dissipation	Рт	16 $\text{cm}^2 \times 0.7$ mm, ceramic substrate used	2.0	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

The internal diode connected between the gate and source of this product is to protect the product from static electricity. If the product is used in a circuit where the rated voltage of the product may be exceeded, connect a protection circuit.

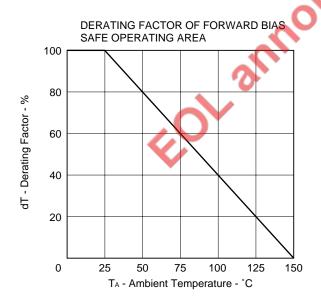
Take adequate preventive measures against static electricity when handling this product.

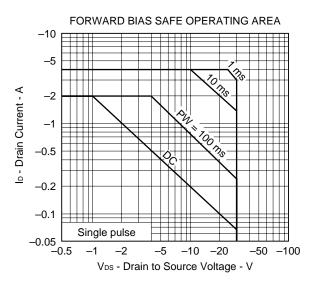
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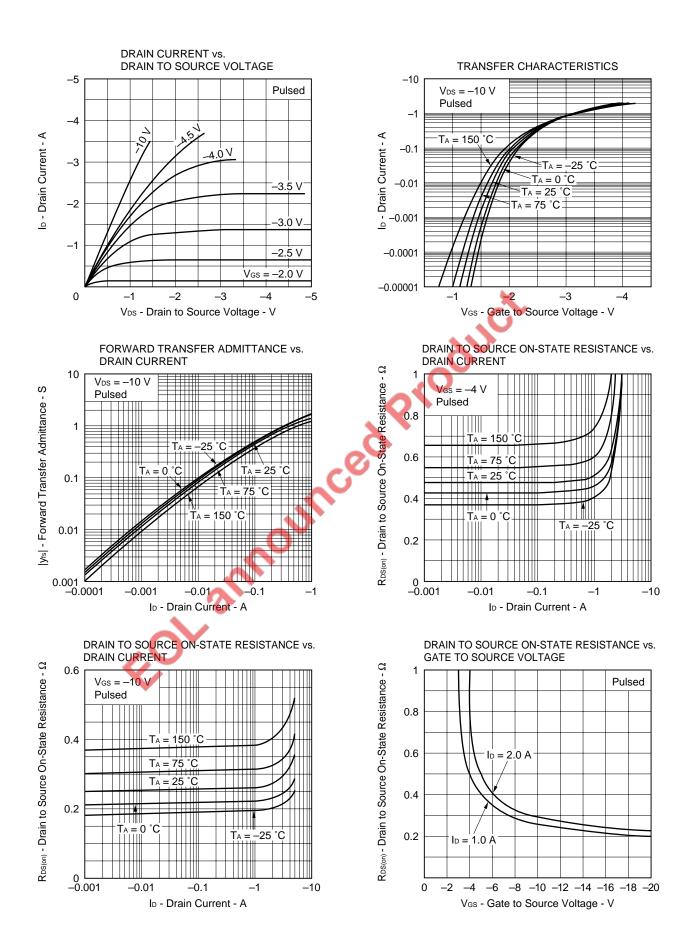
ELECTRICAL CHARACTERISTICS (TA = 25 °C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-Off Current	IDSS	$V_{DS} = -30 V, V_{GS} = 0$			-10	μA
Gate Leakage Current	lgss	$V_{GS} = -16/+10 V, V_{DS} = 0$			±10	μA
Gate Cut-Off Voltage	VGS(off)	$V_{DS} = -10 \text{ V}, \text{ ID} = -1 \text{ mA}$	-1.0	-1.5	-2.0	V
Forward Transfer Admittance	y _{fs}	$V_{DS} = -10 \text{ V}, \text{ ID} = -1.0 \text{ A}$	1.0			S
Drain to Source On-State Resistance	RDS(on)1	$V_{GS} = -4 V, I_{D} = -1.0 A$		0.50	0.60	Ω
Drain to Source On-State Resistance	RDS(on)2	Vgs = -10 V, Id = -1.0 A		0.26	0.35	Ω
Input Capacitance	Ciss	$V_{DS} = -10 V, V_{GS} = 0,$		300		pF
Output Capacitance	Coss	f = 1.0 MHz		245		pF
Reverse Transfer Capacitance	Crss			120		pF
Turn-On Delay Time	t _{d(on)}	$V_{DD} = -25 \text{ V}, \text{ Id} = -1.0 \text{ A}$		5.5		ns
Rise Time	tr	$V_{GS(on)} = -10 V$		32		ns
Turn-Off Delay Time	td(off)	$R_G = 10 \Omega, R_L = 25 \Omega$		110		ns
Fall Time	tr			130		ns
Gate Input Charge	QG	Vps = -24 V,	0	12.2		nC
Gate to Source Charge	QGS	VGS = −10 V,		1.2		nC
Gate to Drain Charge	Qgd	$I_D = -1.8 \text{ A}, I_G = -2 \text{ mA}$		4.6		nC
Internal Diode Reverse Recovery Time	trr	IF = 2.0 A,		95		ns
Internal Diode Reverse Recovery Charge	Qrr	di/dt = 50 A/µs		85		nC

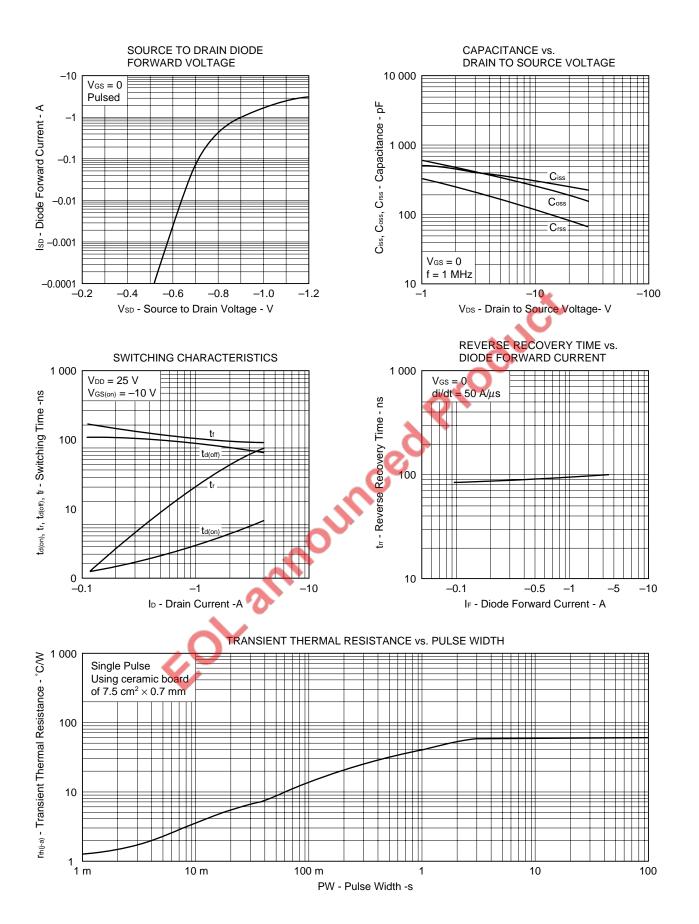
TYPICAL CHARACTERISTICS ($T_A = 25$ °C)







NEC



REFERENCE

Document Name	Document No.		
NEC semiconductor device reliability/quality control system	TEI-1202		
Quality grade on NEC semiconductor devices	IEI-1209		
Semiconductor device mounting technology manual	C10535E		
Guide to quality assurance for semiconductor devices	MEI-1202		
Semiconductor selection guide	X10679E		

tot announced product

[MEMO]

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NEC devices are classified into the following three quality grades:

"Standard", "Special", and "Specific". The Specific quality grade applies only to devices developed based on a customer designated "quality assurance program" for a specific application. The recommended applications of a device depend on its quality grade, as indicated below. Customers must check the quality grade of each device before using it in a particular application.

Standard: Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots

Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

Specific: Aircrafts, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems or medical equipment for life support, etc.

The quality grade of NEC devices in "Standard" unless otherwise specified in NEC's Data Sheets or Data Books. If customers intend to use NEC devices for applications other than those specified for Standard quality grade, they should contact NEC Sales Representative in advance.

Anti-radioactive design is not implemented in this product.

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