

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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P-CHANNEL MOSFET (5-PIN 2 CIRCUITS) FOR SWITCHING

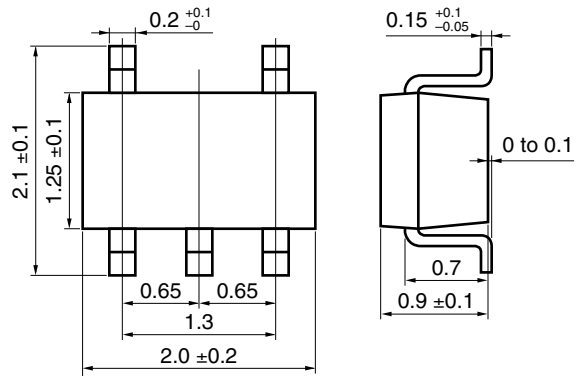
DESCRIPTION

The μPA573T is a super-mini-mold device provided with two MOS FET circuits. It achieves high-density mounting and saves mounting costs.

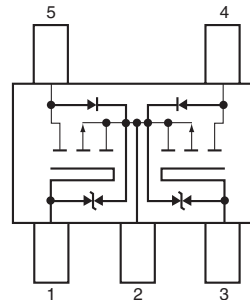
FEATURES

- Two source common MOS FET circuits in package the same size as SC-70
- Directly driven by ICs having a 3 V power supply
- Automatic mounting supported

PACKAGE DIMENSIONS (in millimeters)



<R> EQUIVALENT CIRCUIT



PIN CONNECTION

1. Gate1 (G1)
 2. Source (common)
 3. Gate2 (G2)
 4. Drain2 (D2)
 5. Drain1 (D1)
- Marking: CB

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

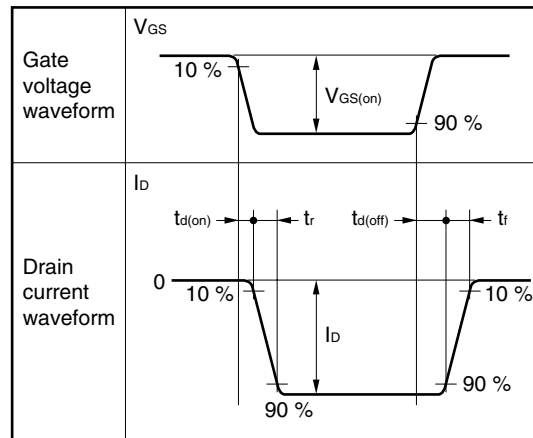
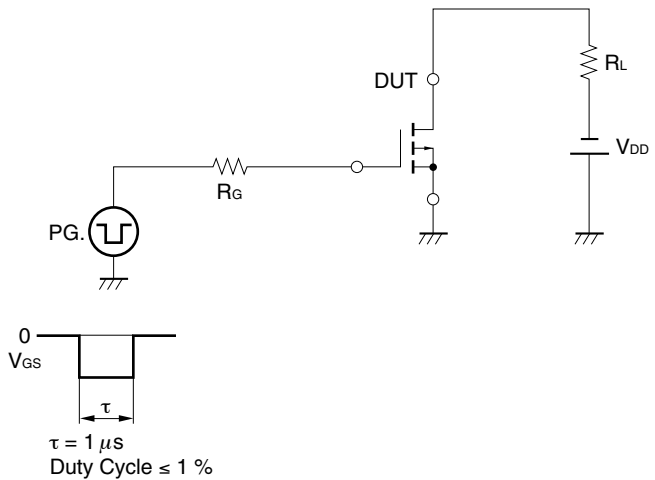
PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS	UNIT
Drain to Source Voltage	V _{DSS}	V _{GS} = 0 V	-30	V
Gate to Source Voltage	V _{GSS}	V _{DS} = 0 V	±7	V
Drain Current (DC)	I _{D(DC)}		±100	mA
Drain Current (pulse)	I _{D(pulse)}	PW ≤ 10 ms, Duty Cycle ≤ 50 %	±200	mA
Total Power Dissipation	P _T		200 (Total)	mW
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

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ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

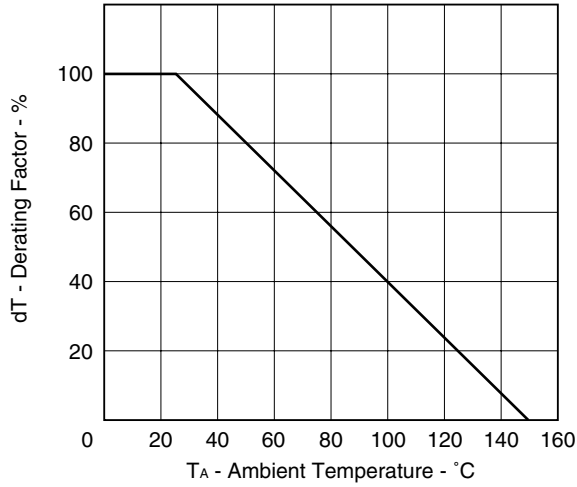
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	I _{DSS}	V _{DS} = -30 V, V _{GS} = 0			-1.0	μA
Gate Leakage Current	I _{GSS}	V _{GS} = ±5 V, V _{DS} = 0			±3.0	μA
Gate Cut-off Voltage	V _{GS(off)}	V _{DS} = -3 V, I _D = -10 μA	-1.6	-1.9	-2.3	V
Forward Transfer Admittance	y _{fs}	V _{DS} = -3 V, I _D = -10 mA	20	30		S
Drain to Source On-State Resistance	R _{DS(on)1}	V _{GS} = -2.5 V, I _D = -1 mA		55	100	Ω
Drain to Source On-State Resistance	R _{DS(on)2}	V _{GS} = -4.0 V, I _D = -10 mA		20	25	Ω
Input Capacitance	C _{iss}	V _{DS} = -5.0 V, V _{GS} = 0, f = 1 MHz		16		pF
Output Capacitance	C _{oss}			13		pF
Reverse Transfer Capacitance	C _{rss}			2		pF
Turn-On Delay Time	t _{d(on)}	V _{DD} = -5 V, I _D = -10 mA, V _{GS} = -5 V, R _G = 10 Ω		10		ns
Rise Time	t _r			40		ns
Turn-Off Delay Time	t _{d(off)}			130		ns
Fall Time	t _f			80		ns

SWITCHING TIME MEASUREMENT CIRCUIT AND CONDITIONS

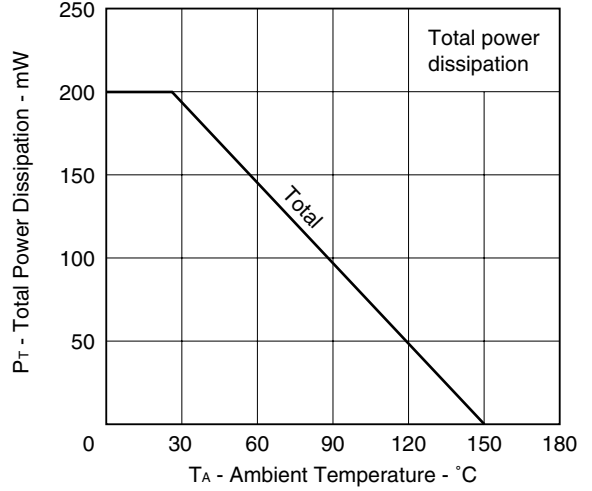


TYPICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$)

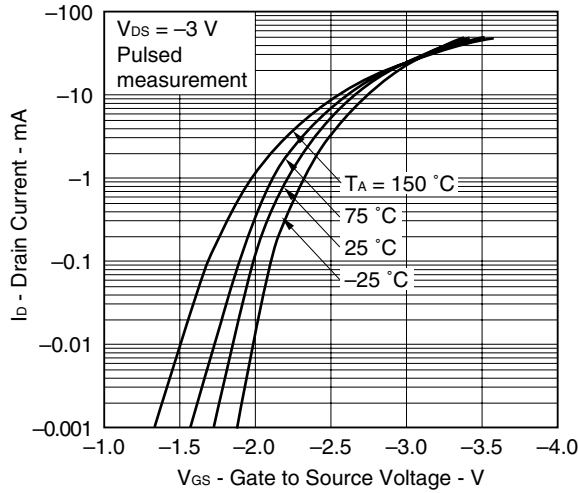
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



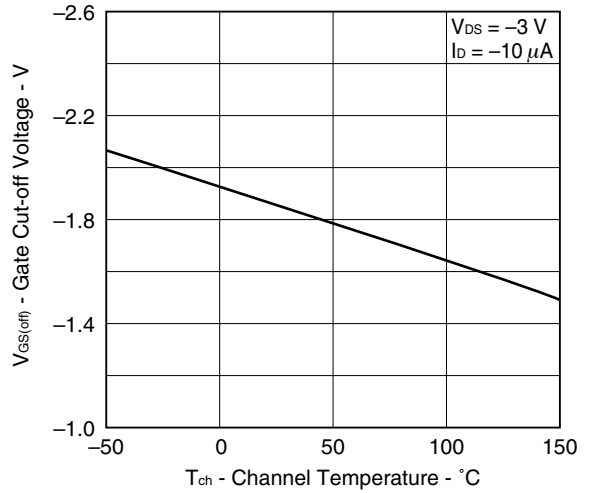
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



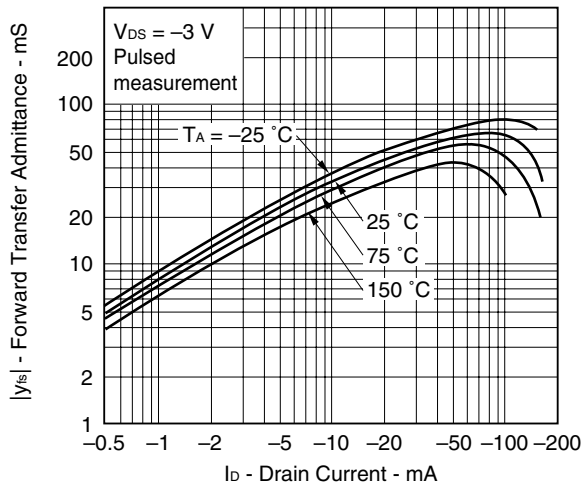
TRANSFER CHARACTERISTICS



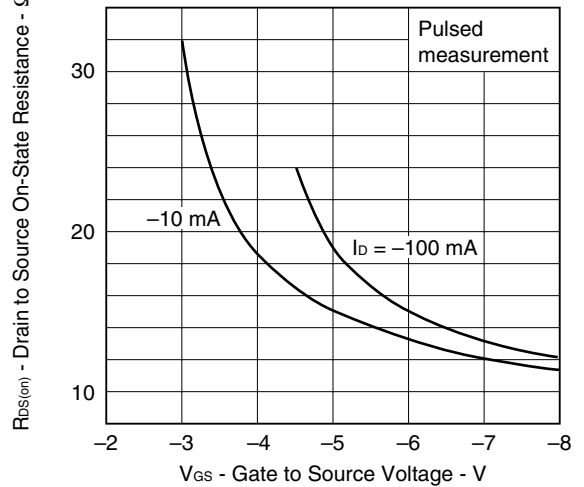
GATE TO SOURCE CUTOFF VOLTAGE vs. CHANNEL TEMPERATURE

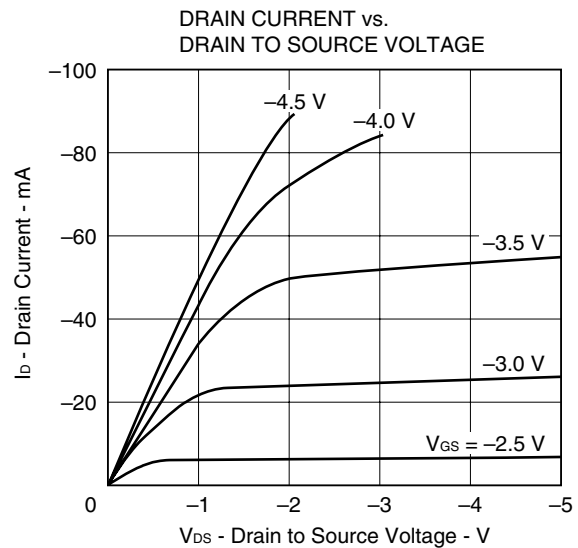
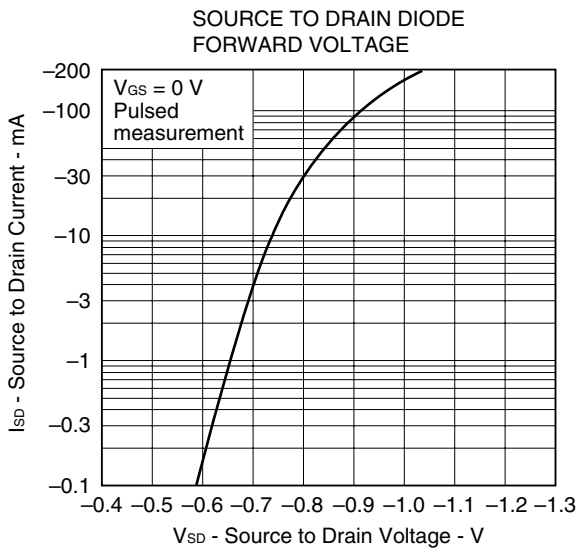
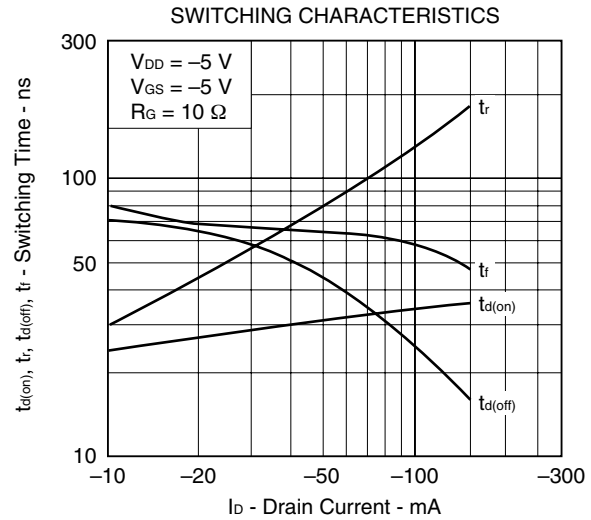
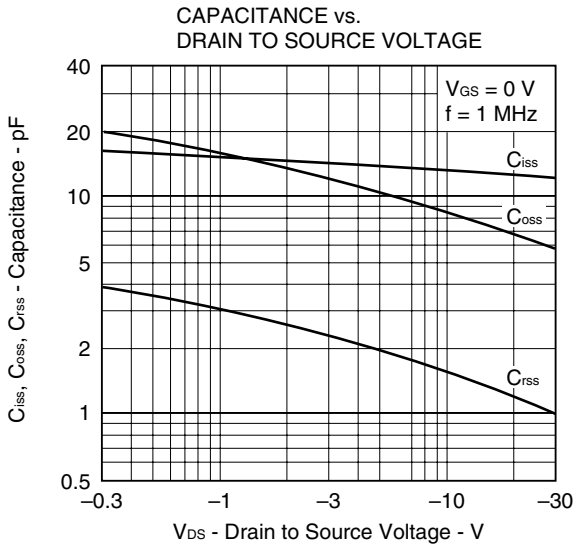
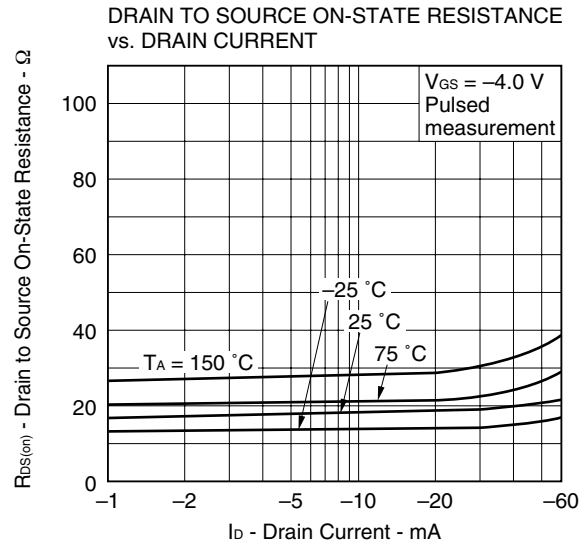
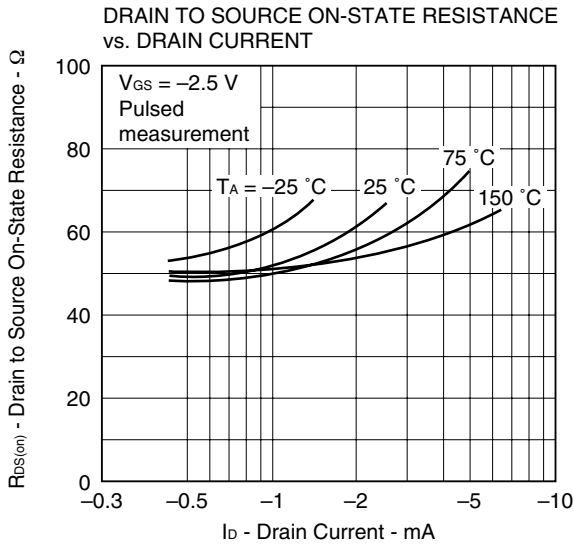


FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



DRAIN TO SOURCE ON-STATE RESISTANCE vs. GATE TO SOURCE VOLTAGE





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