# DATA SHEET

# MOS FIELD EFFECT TRANSISTOR

μ**ΡΑ573Τ** 

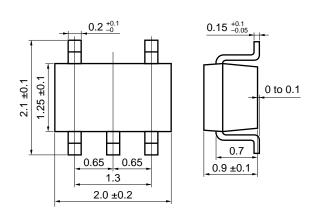
## P-CHANNEL MOS FET (5-PIN 2 CIRCUITS) FOR SWITCHING

The  $\mu$ PA573T is a super-mini-mold device provided with two MOS FET circuits. It achieves high-density mounting and saves mounting costs.

#### **FEATURES**

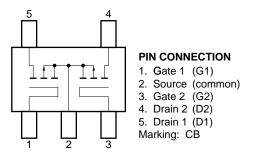
NEC

- 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)** 

#### EQUIVALENT CIRCUIT



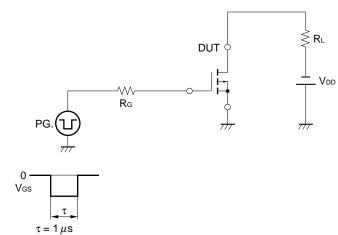
#### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25$ °C)

PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS	UNIT
Drain to Source Voltage	Vdss	Vcs = 0	-30	V
Gate to Source Voltage	Vgss	V <sub>DS</sub> = 0	∓7	V
Drain Current (DC)	ID(DC)		∓100	mA
Drain Current (pulse)	D(pulse)	PW $\leq$ 10 ms, Duty Cycle $\leq$ 50 %	∓200	mA
Total Power Dissipation	Рт		200 (Total)	mW
Channel Temperature	Tch		150	°C
Operating Temperature	Topt		-55 to +80	°C
Storage Temperature	Tstg		-55 to +150	°C

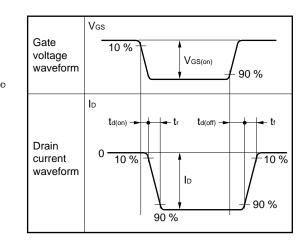
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	loss	$V_{DS} = -30 V, V_{GS} = 0$			-1.0	μΑ
Gate Leakage Current	lgss	$V_{GS} = \mp 5 V, V_{DS} = 0$			∓3.0	μΑ
Gate Cut-off Voltage	VGS(off)	$V_{DS} = -3 V, I_D = -10 \mu A$	-1.6	-1.9	-2.3	V
Forward Transfer Admittance	y <sub>fs</sub>	$V_{DS} = -3 V$ , $I_{D} = -10 mA$	20	30		S
Drain to Source On-State Resistance	RDS(on)1	$V_{GS} = -2.5 V, I_D = -1 mA$		55	100	Ω
Drain to Source On-State Resistance	RDS(on)2	$V_{GS} = -4.0 \text{ V}, \text{ Id} = -10 \text{ mA}$		20	25	Ω
Input Capacitance	Ciss	$V_{DS} = -5.0 V$ , $V_{GS} = 0$ , f = 1 MHz		16		pF
Output Capacitance	Coss	-		13		pF
Reverse Transfer Capacitance	Crss	-		2		pF
Turn-On Delay Time	td(on)	$V_{\text{DD}} = -5 \text{ V}, \text{ I}_{\text{D}} = -10 \text{ mA}, \text{ V}_{\text{GS(on)}} = -5 \text{ V},$		10		ns
Rise Time	tr	$R_G = 10 \ \Omega, \ R_L = 500 \ \Omega$		40		ns
Turn-Off Delay Time	td(off)			130		ns
Fall Time	tŕ			80		ns

### ELECTRICAL CHARACTERISTICS (TA = 25 °C)

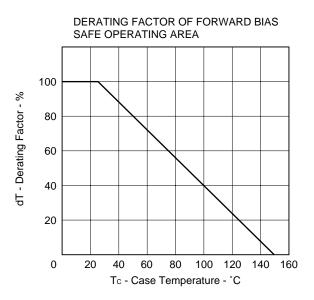
#### SWITCHING TIME MEASUREMENT CIRCUIT AND CONDITIONS

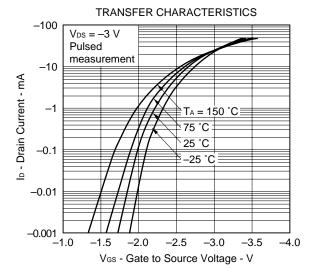


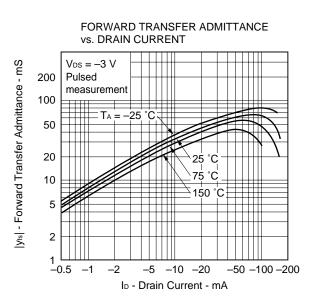
Duty Cycle ≤ 1 %

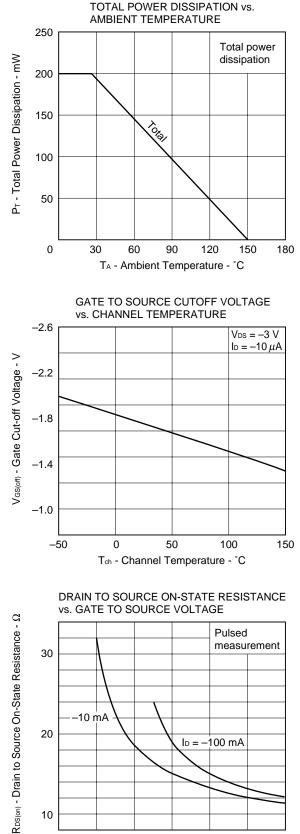


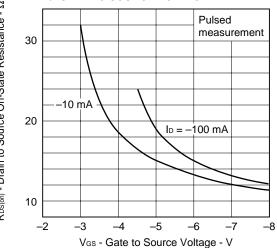


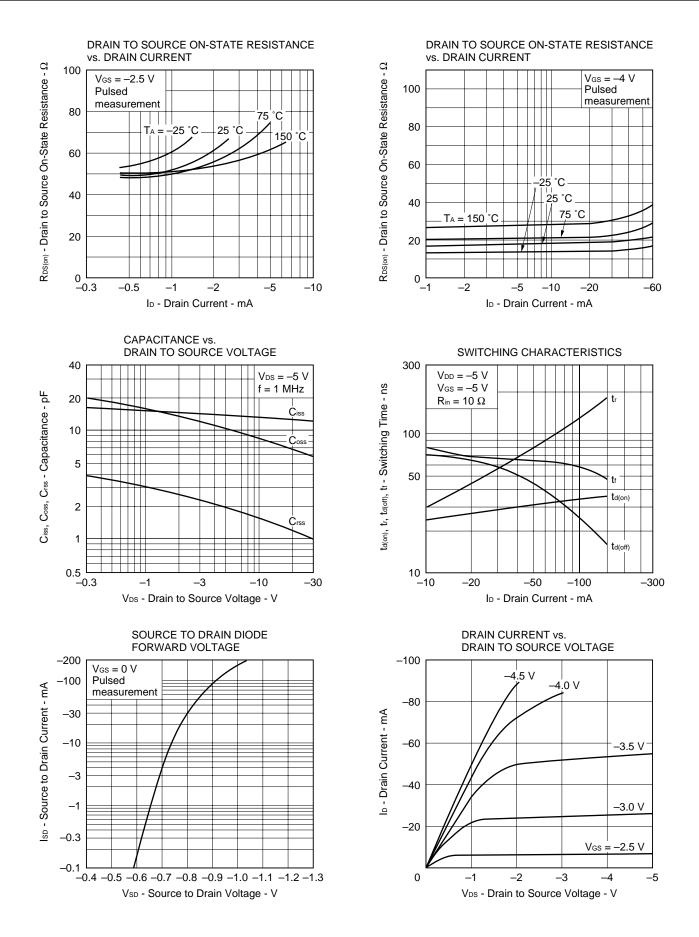












## REFERENCE

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		

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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.

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Anti-radioactive design is not implemented in this product.

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