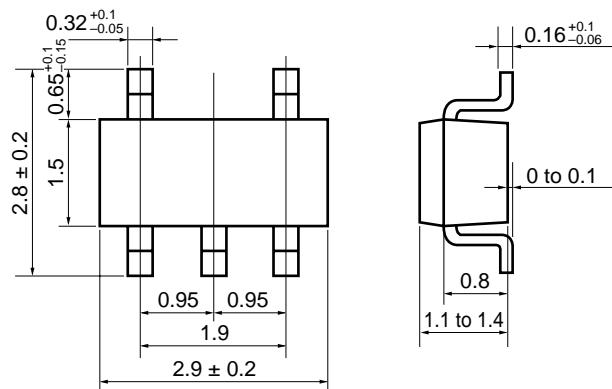


## P-CHANNEL MOS FET (5-PIN 2 CIRCUITS)

The  $\mu$ PA503T is a mini-mold device provided with two MOSFET circuits. It achieves high-density mounting and saves mounting costs.

## FEATURES

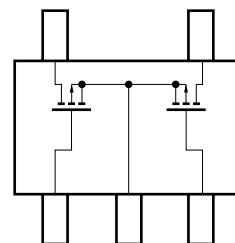
- Two source common MOS FET circuits in package the same size as SC-59
- Complement to  $\mu$ PA502T
- Automatic mounting supported

PACKAGE DIMENSIONS  
(in millimeters)

## ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	V <sub>DSS</sub>	-50	V
Gate to Source Voltage	V <sub>GSS</sub>	±16	V
Drain Current (DC)	I <sub>D(DC)</sub>	-100	mA
Drain Current (pulse)	I <sub>D(pulse)</sub> *	-200	mA
Total Power Dissipation	P <sub>T</sub>	300 (TOTAL)	mW
Channel Temperature	T <sub>ch</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 10 ms, Duty Cycle ≤ 50 %

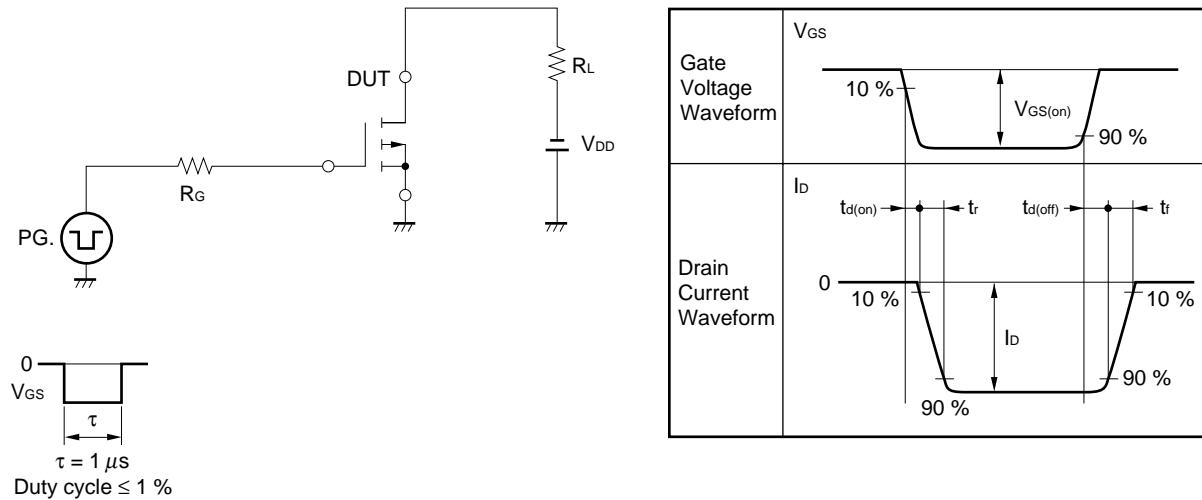
PIN CONNECTION  
(Top view)

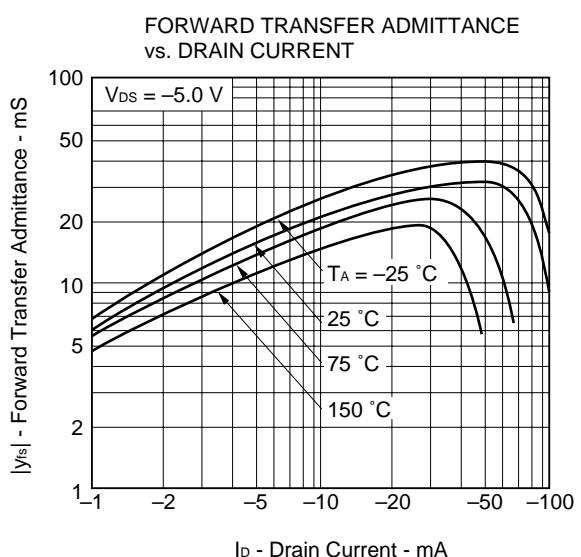
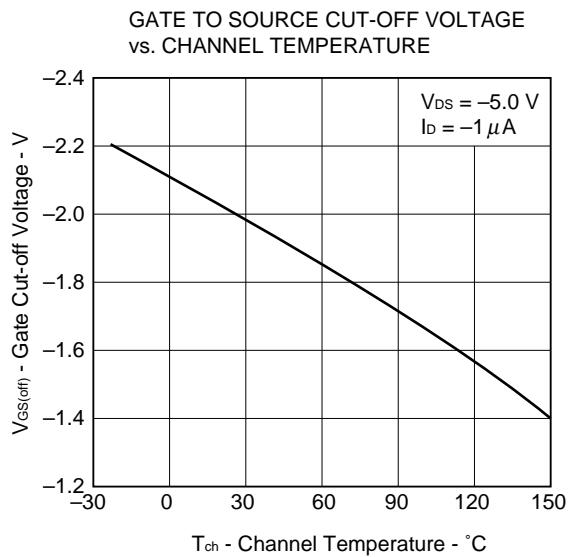
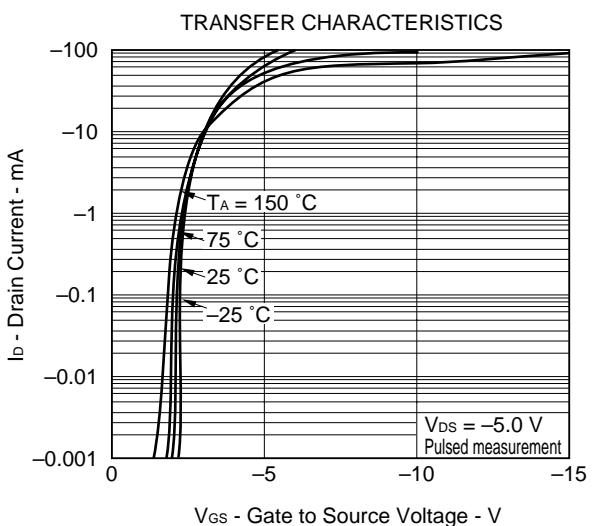
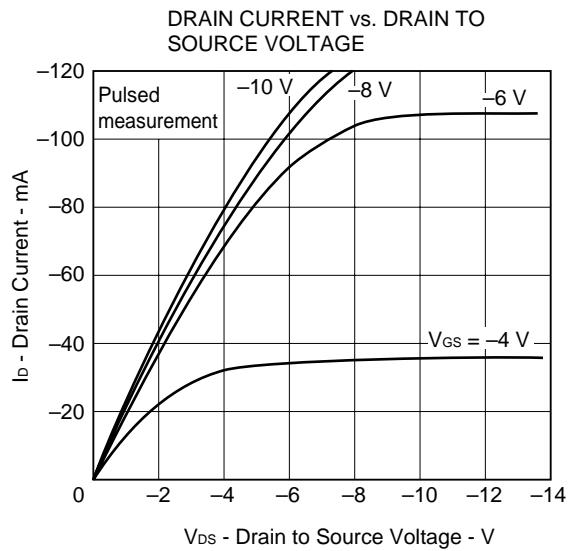
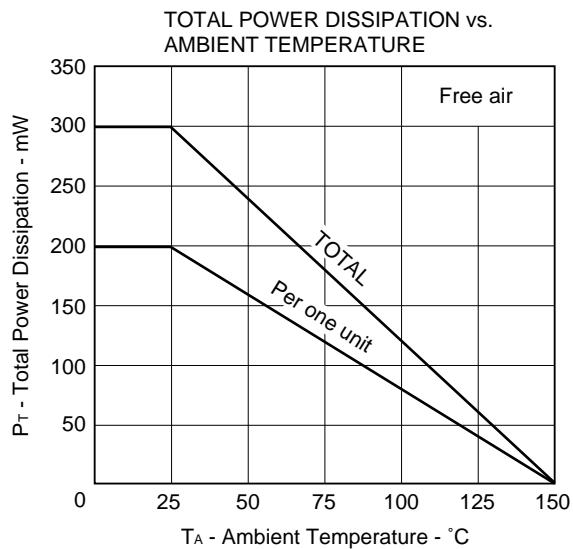
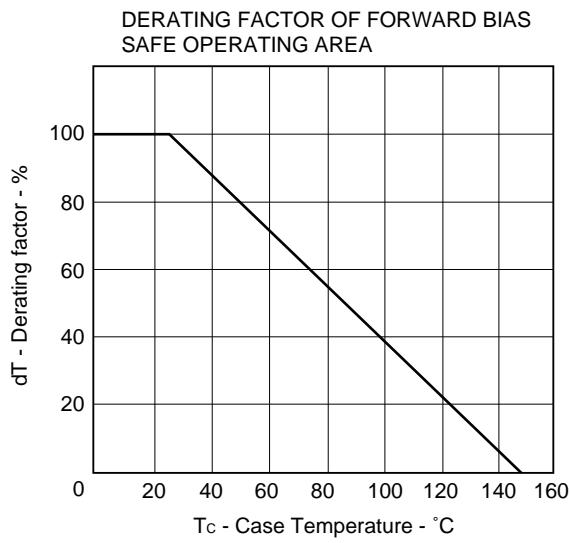
ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ C$ )

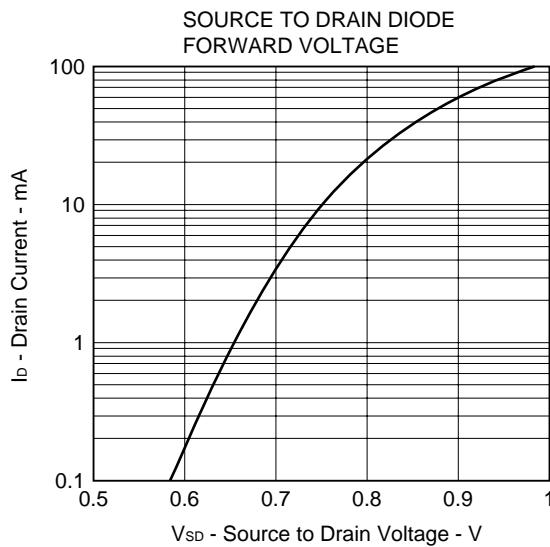
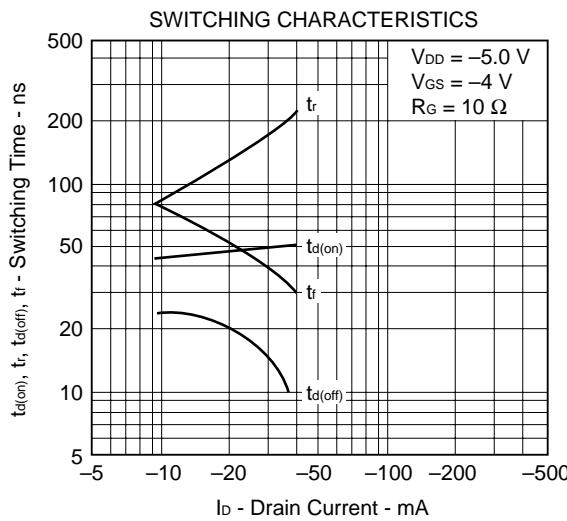
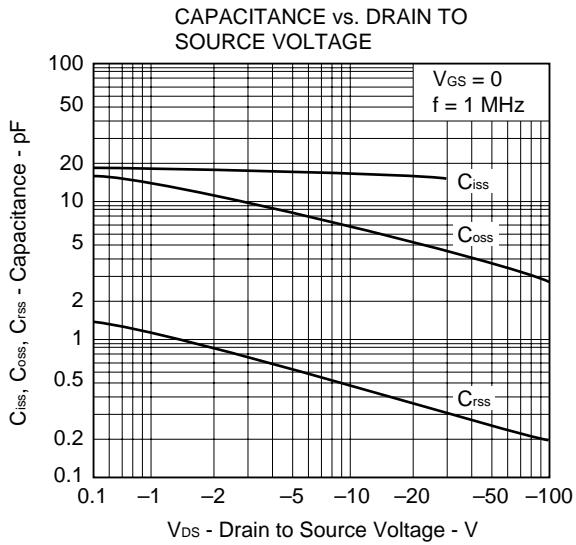
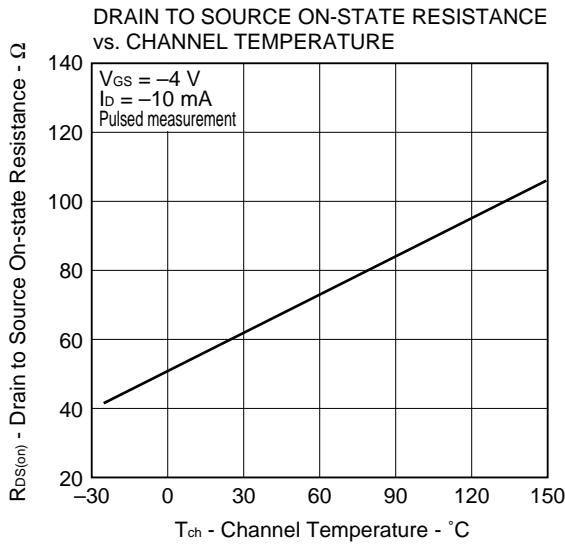
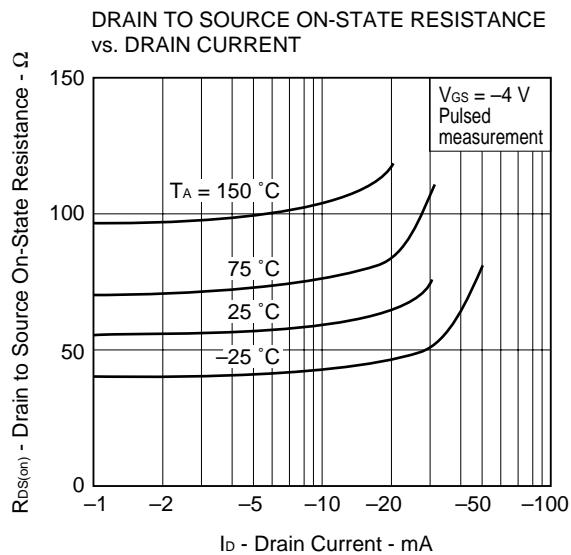
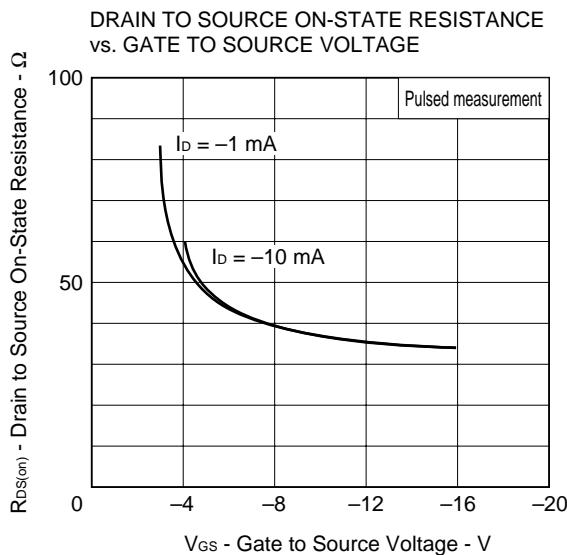
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = -50 V, V_{GS} = 0$			-1.0	$\mu A$
Gate Leakage Current	$I_{GSS}$	$V_{GS} = \pm 16 V, V_{DS} = 0$			$\pm 10$	$\mu A$
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = -5.0 V, I_D = -1.0 \mu A$	-1.5	-1.9	-2.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -5.0 V, I_D = -10 mA$	15			$mS$
Drain to Source On-State Resistance	$R_{DS(on)1}$	$V_{GS} = -4.0 V, I_D = -10 mA$		60	100	$\Omega$
Drain to Source On-State Resistance	$R_{DS(on)2}$	$V_{GS} = -10 V, I_D = -10 mA$		40	60	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -5.0 V, V_{GS} = 0, f = 1.0 \text{ MHz}$		17		$pF$
Output Capacitance	$C_{oss}$			9		$pF$
Reverse Transfer Capacitance	$C_{rss}$			1		$pF$
Turn-On Delay Time	$t_{d(on)}$	$V_{GS(on)} = -4.0 V, R_G = 10 \Omega$ $V_{DD} = -5.0 V, I_D = -10 mA$ $R_L = 500 \Omega$		45		ns
Rise Time	$t_r$			75		ns
Turn-Off Delay Time	$t_{d(off)}$			25		ns
Fall Time	$t_f$			80		ns

Marking: CA

## SWITCHING TIME MEASUREMENT CIRCUIT AND MEASUREMENT CONDITIONS (RESISTANCE LOADED)



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



**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.

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.