

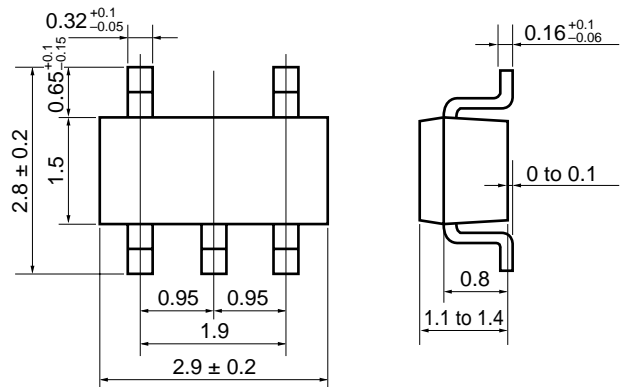
P-CHANNEL MOS FET (5-PIN 2 CIRCUITS)

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)

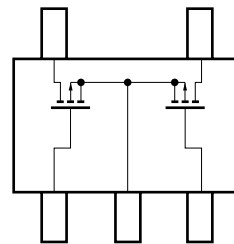


ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	$V_{DSS}$	-50	V
Gate to Source Voltage	$V_{GSS}$	$\pm 16$	V
Drain Current (DC)	$I_{D(PC)}$	-100	mA
Drain Current (pulse)	$I_{D(pulse)^*}$	-200	mA
Total Power Dissipation	$P_T$	300 (TOTAL)	mW
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\*  $PW \leq 10$  ms, Duty Cycle  $\leq 50$  %

PIN CONNECTION  
 (Top view)

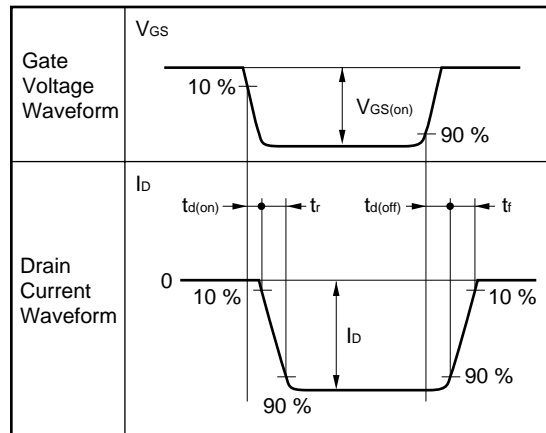
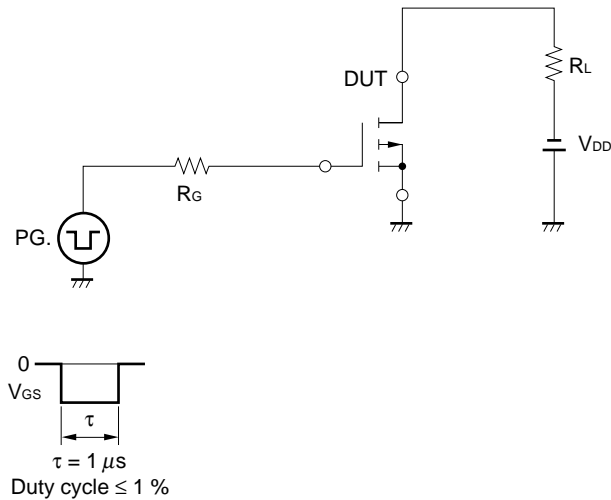


**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)**

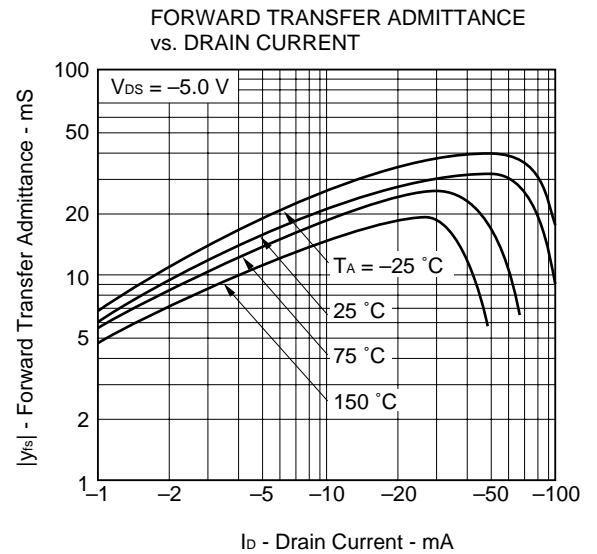
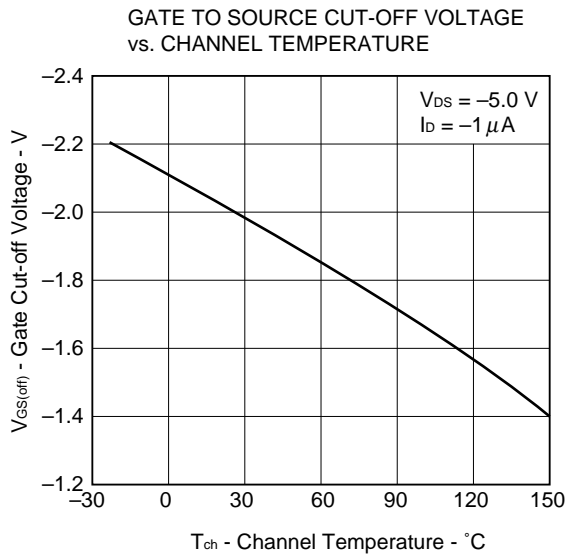
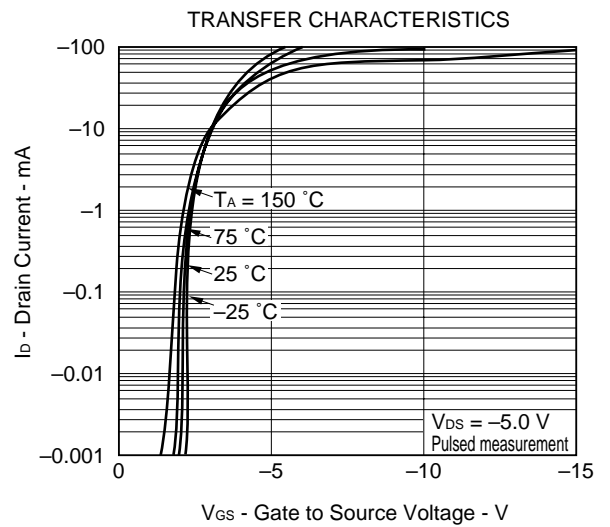
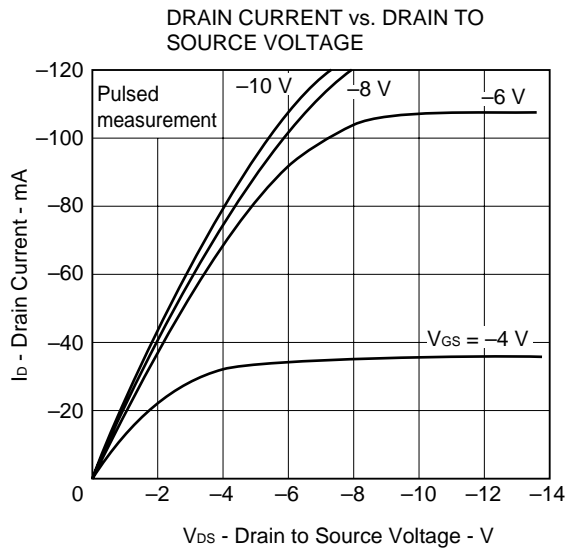
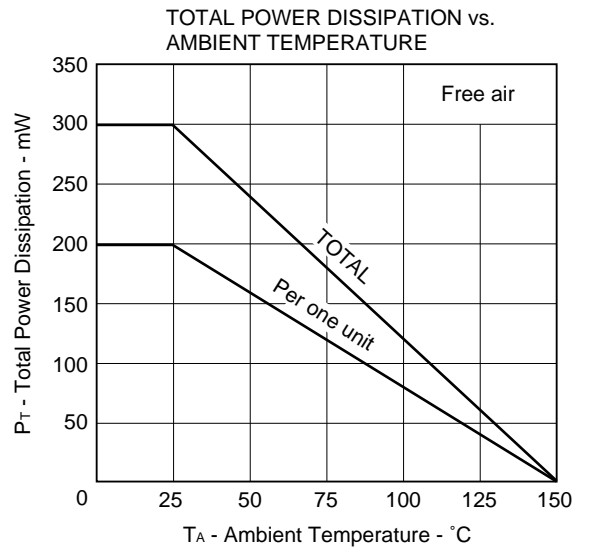
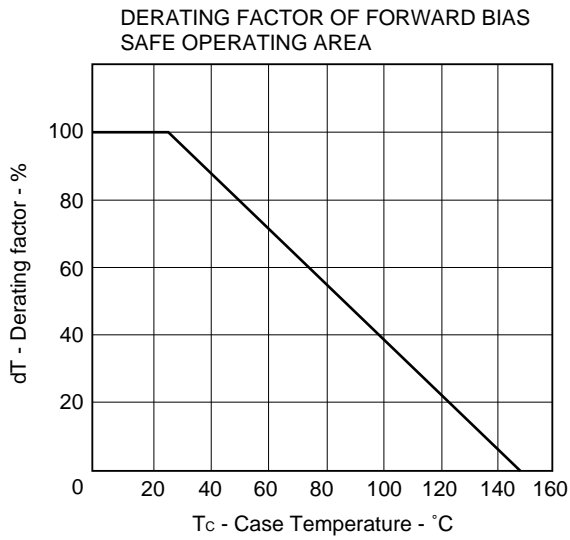
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = -50 V, V <sub>GS</sub> = 0			-1.0	μA
Gate Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±16 V, V <sub>DS</sub> = 0			±10	μA
Gate Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = -5.0 V, I <sub>D</sub> = -1.0 μA	-1.5	-1.9	-2.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> = -5.0 V, I <sub>D</sub> = -10 mA	15			mS
Drain to Source On-State Resistance	R <sub>DS(on)1</sub>	V <sub>GS</sub> = -4.0 V, I <sub>D</sub> = -10 mA		60	100	Ω
Drain to Source On-State Resistance	R <sub>DS(on)2</sub>	V <sub>GS</sub> = -10 V, I <sub>D</sub> = -10 mA		40	60	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = -5.0 V, V <sub>GS</sub> = 0, f = 1.0 MHz		17		pF
Output Capacitance	C <sub>oss</sub>			9		pF
Reverse Transfer Capacitance	C <sub>rss</sub>			1		pF
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>GS(on)</sub> = -4.0 V, R <sub>G</sub> = 10 Ω V <sub>DD</sub> = -5.0 V, I <sub>D</sub> = -10 mA R <sub>L</sub> = 500 Ω		45		ns
Rise Time	t <sub>r</sub>			75		ns
Turn-Off Delay Time	t <sub>d(off)</sub>			25		ns
Fall Time	t <sub>f</sub>			80		ns

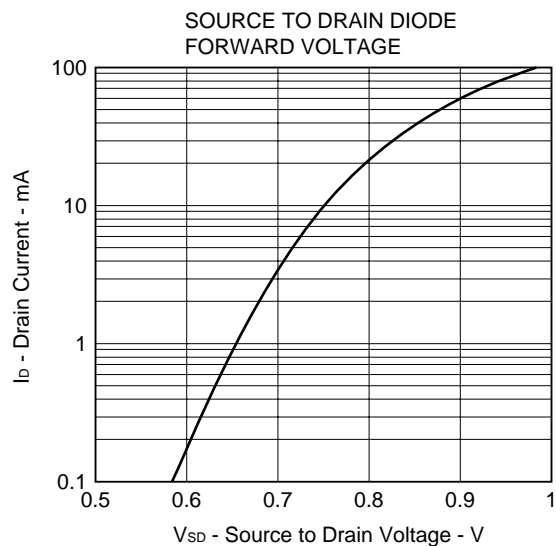
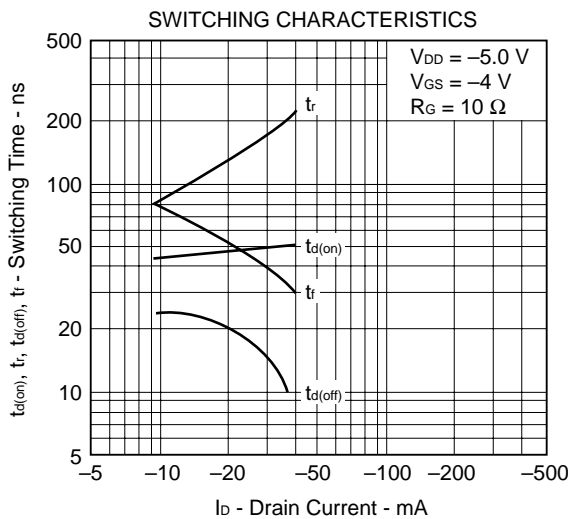
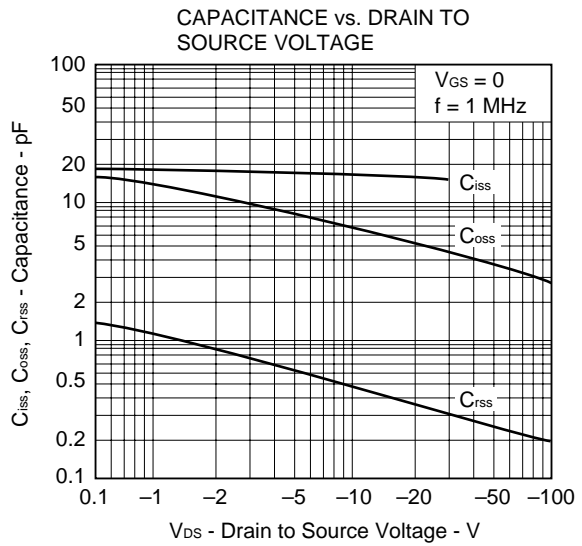
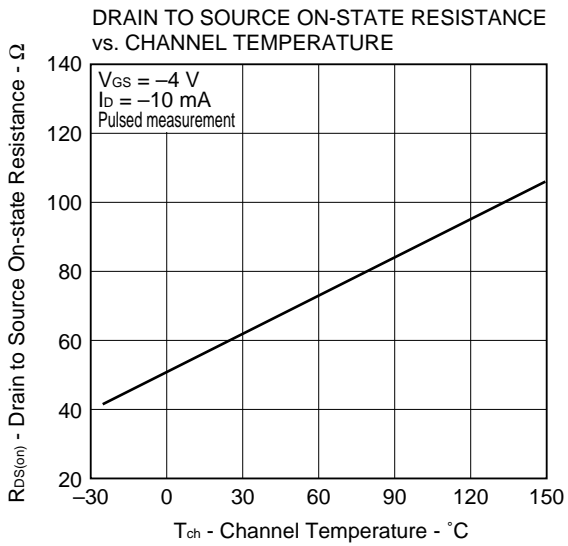
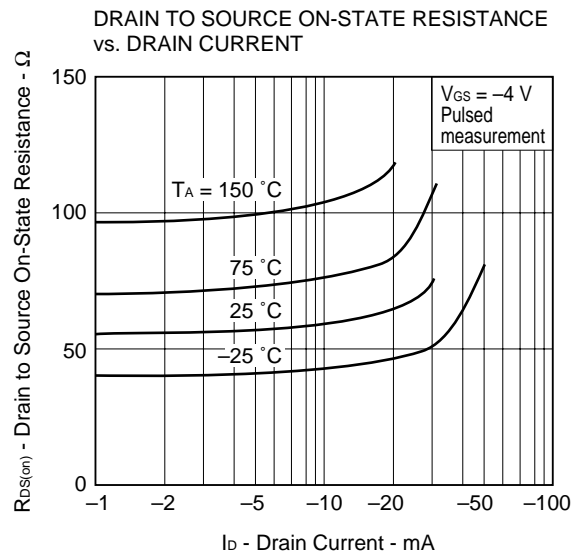
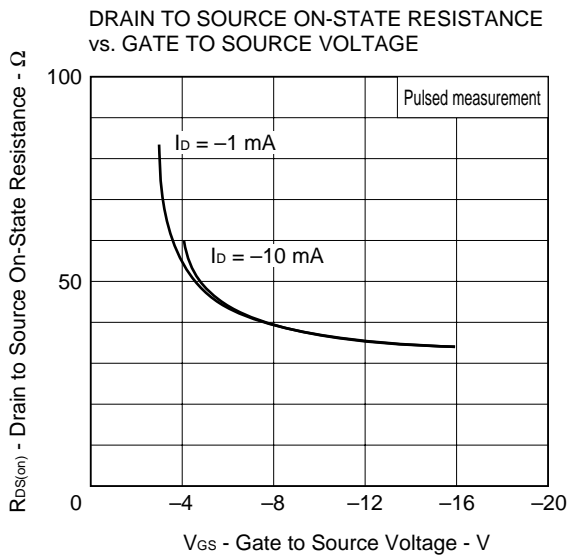
Marking: CA

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



TYPICAL CHARACTERISTICS (T<sub>A</sub> = 25 °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.

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Anti-radioactive design is not implemented in this product.