

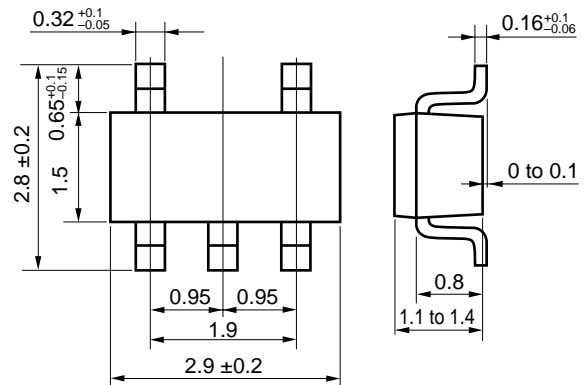
### N-CHANNEL MOS FET (5-PIN 2 CIRCUITS)

The  $\mu$ PA502T is a mini-mold device provided with two MOS FET circuits. It achieves high-density mounting and saves mounting costs.

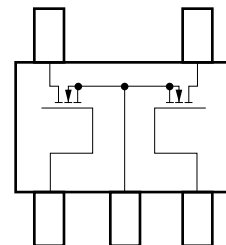
#### FEATURES

- Two source common MOS FET circuits in package the same size as SC-59
- Complement to  $\mu$ PA503T
- Automatic mounting supported

#### PACKAGE DIMENSIONS (in millimeters)



#### PIN CONNECTION (Top view)



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

PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	$V_{bss}$	50	V
Gate to Source Voltage	$V_{gss}$	$\pm 20$	V
Drain Current (DC)	$I_{D(DC)}$	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	$^\circ\text{C}$

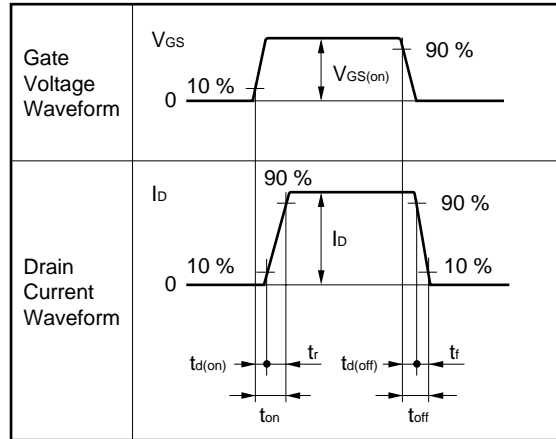
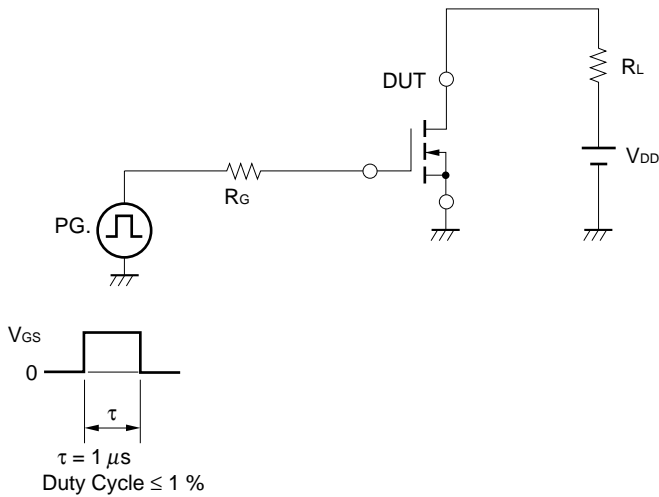
\*  $PW \leq 10$  ms, Duty Cycle  $\leq 50$  %

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

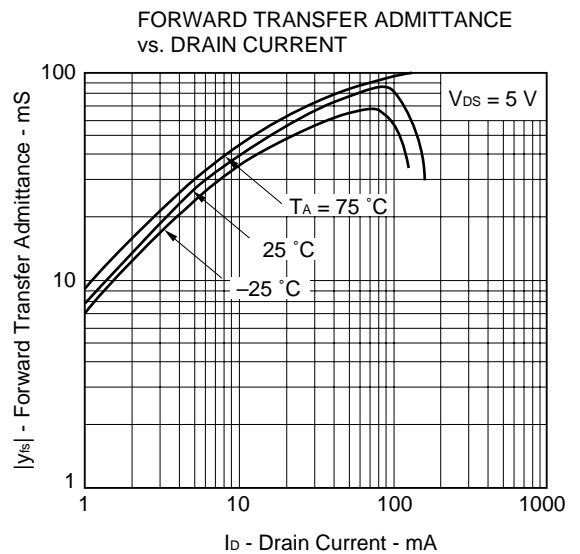
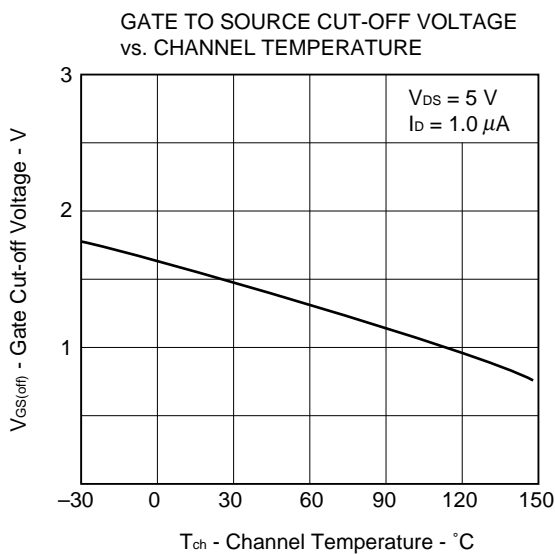
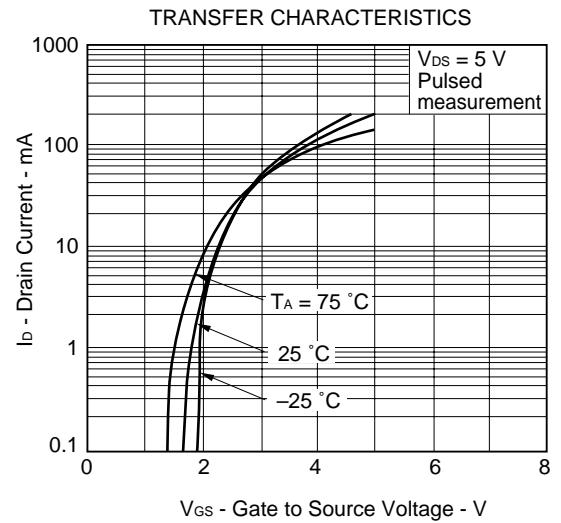
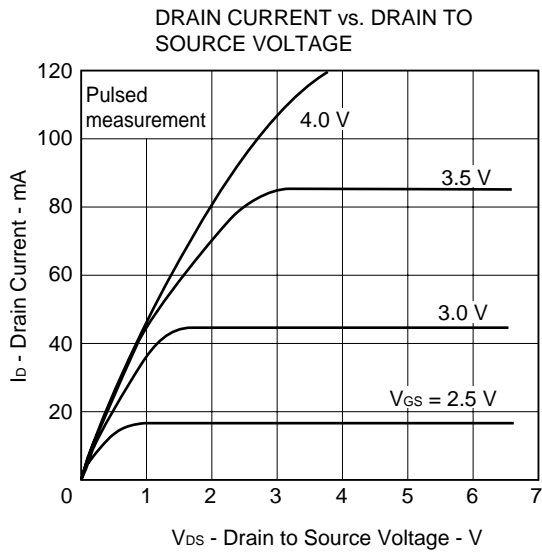
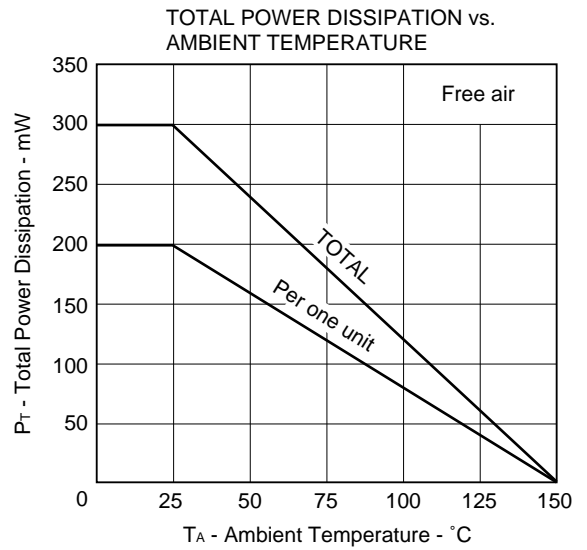
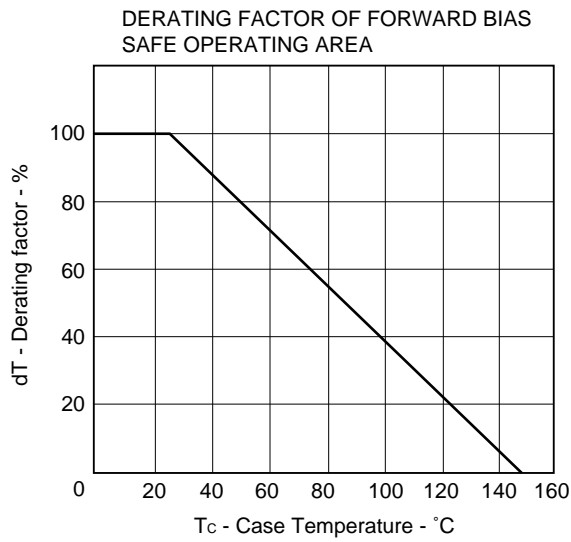
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = 50 V, V <sub>GS</sub> = 0			1.0	μA
Gate Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20 V, V <sub>DS</sub> = 0			±1.0	μA
Gate Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 5.0 V, I <sub>D</sub> = 1.0 μA	0.8	1.4	1.8	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> = 5.0 V, I <sub>D</sub> = 10 mA	20			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		19	30	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		15	25	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5.0 V, V <sub>GS</sub> = 0, f = 1.0 MHz		16		pF
Output Capacitance	C <sub>oss</sub>			12		pF
Reverse Transfer Capacitance	C <sub>rss</sub>			3		pF
Turn-On Delay Time		t <sub>d(on)</sub> V <sub>GS(on)</sub> = 5.0 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		17		ns
Rise Time	t <sub>r</sub>			10		ns
Turn-Off Delay Time	t <sub>d(off)</sub>			68		ns
Fall Time	t <sub>f</sub>			38		ns

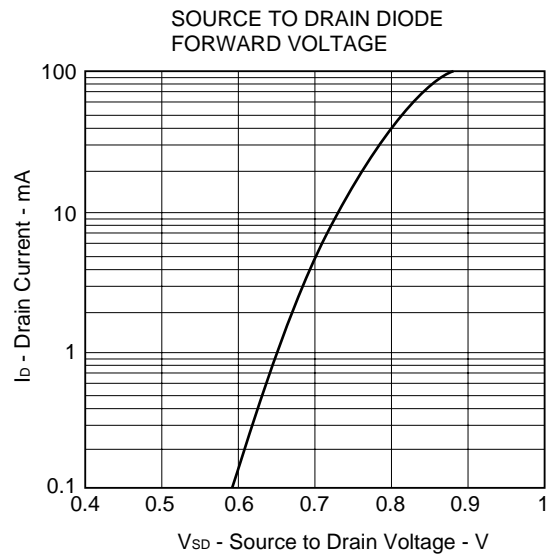
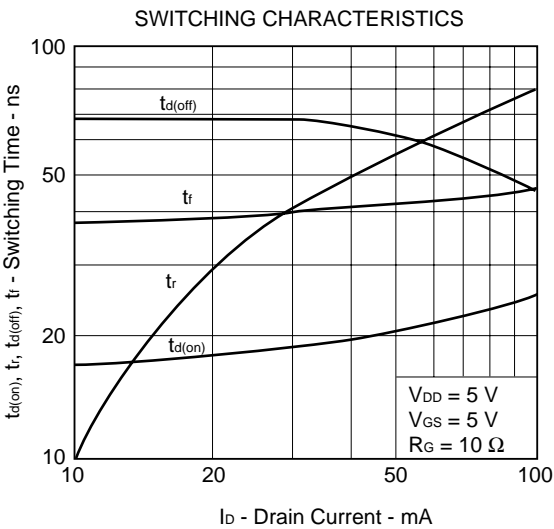
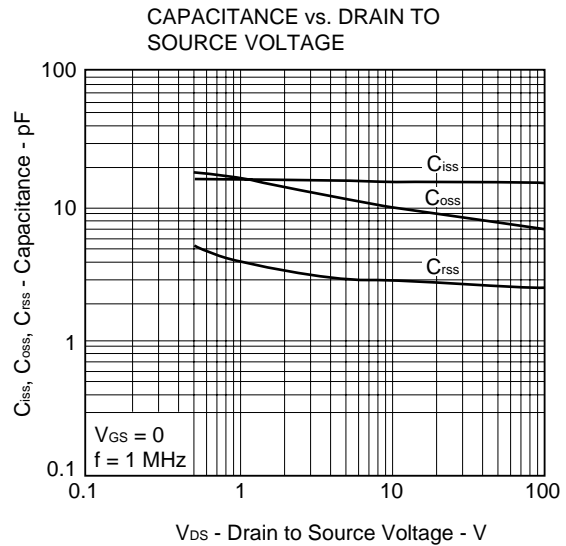
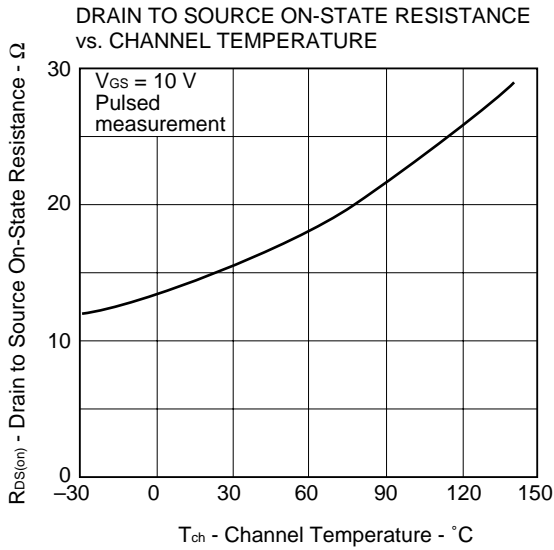
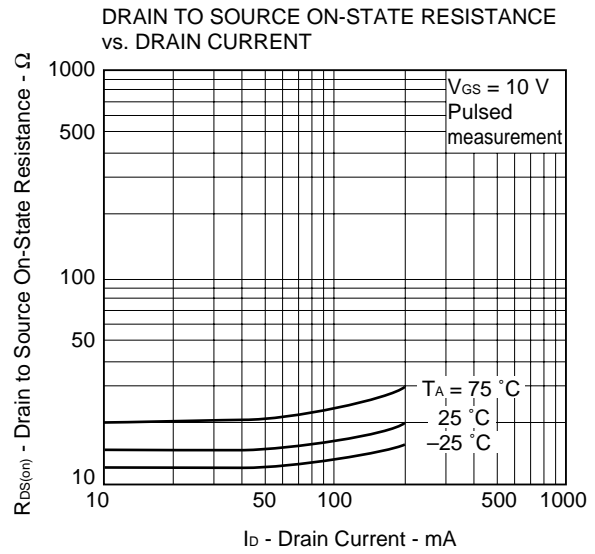
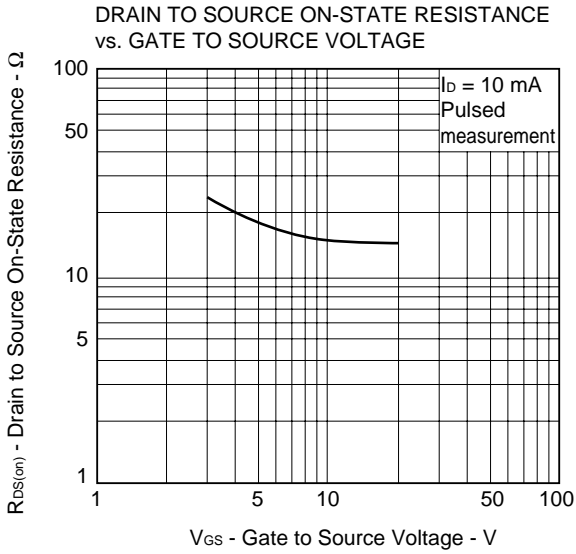
Marking: DA

**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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Anti-radioactive design is not implemented in this product.