

**MOS FIELD EFFECT TRANSISTOR**  
 **$\mu$ PA602T**

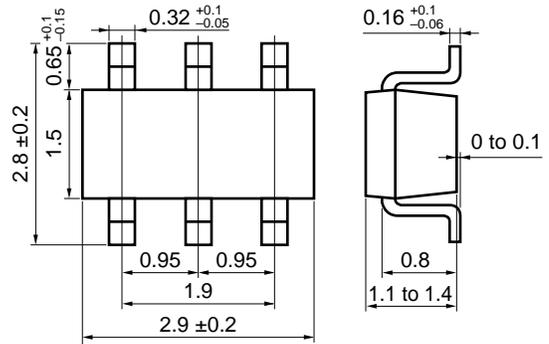
**N-CHANNEL MOS FET (6-PIN 2 CIRCUITS)**

The  $\mu$ PA602T is a mini-mold device provided with two MOS FET circuits. It achieves high-density mounting and saves mounting costs.

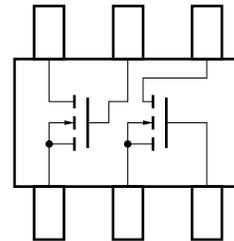
**FEATURES**

- Two MOS FET circuits in package the same size as SC-59
- Complement to  $\mu$ PA603T
- Automatic mounting supported

**PACKAGE DIMENSIONS (in millimeters)**



**PIN CONNECTION (Top view)**



**ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25 °C)**

PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	V <sub>DSS</sub>	50	V
Gate to Source Voltage	V <sub>GSS</sub>	±20	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

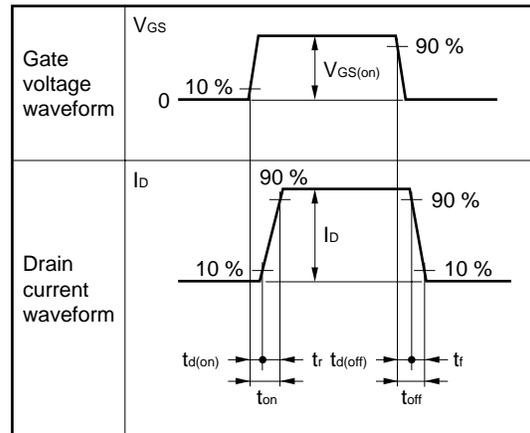
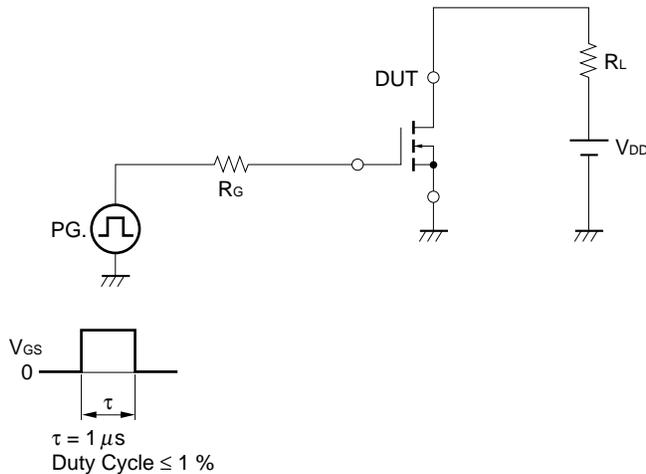
\* PW ≤ 10 ms, Duty Cycle ≤ 50 %

**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

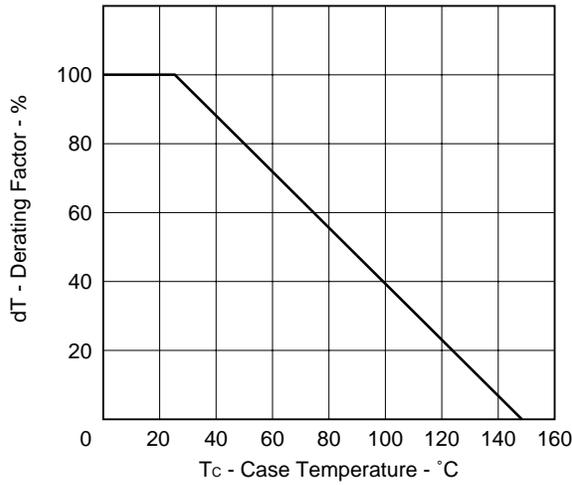
Marking: IA

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

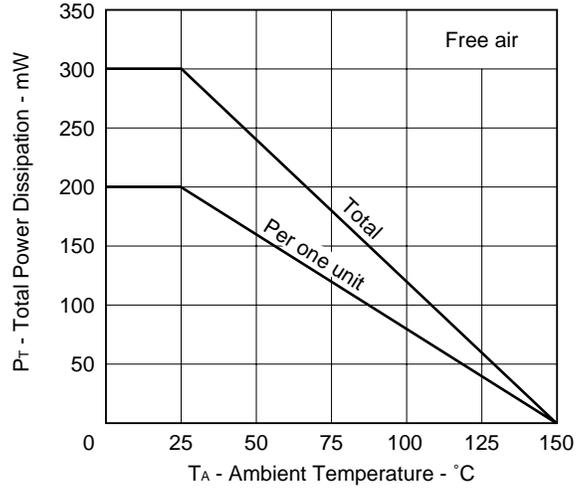


TYPICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

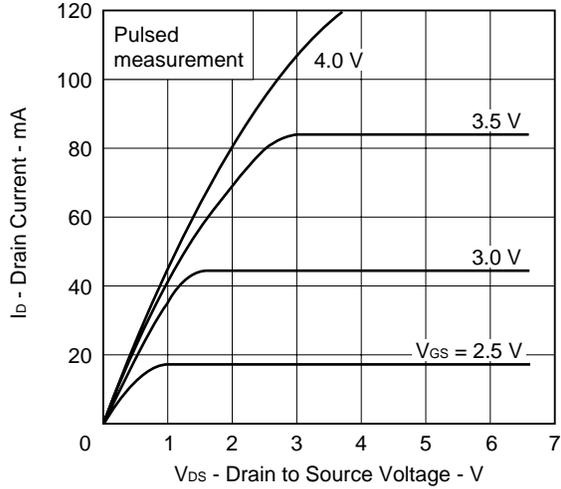
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



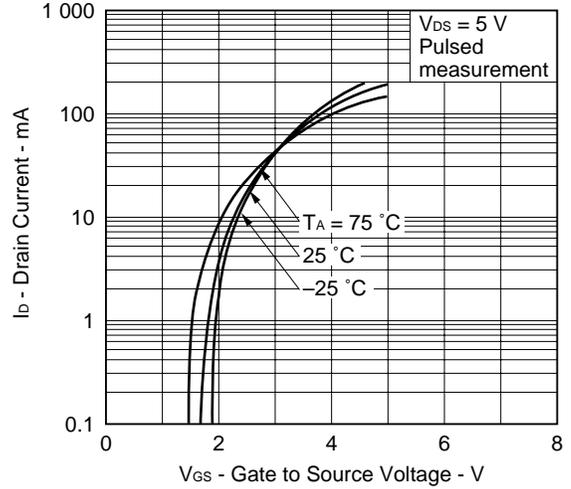
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



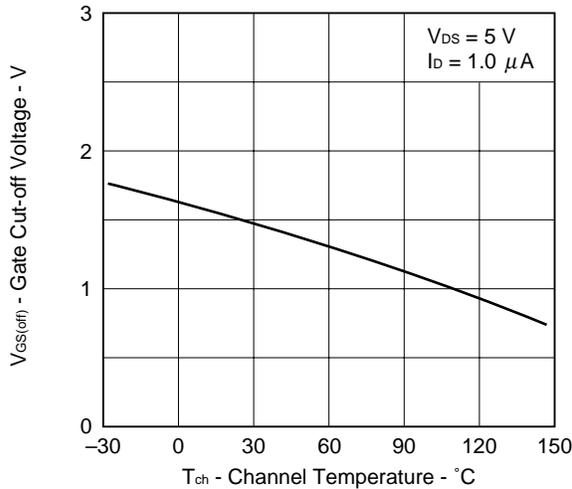
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



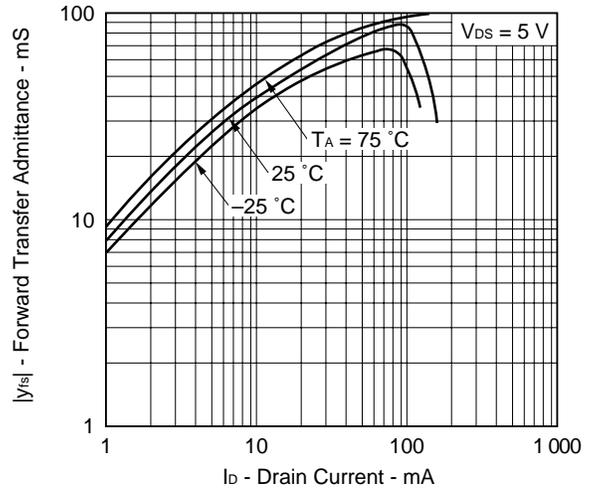
TRANSFER CHARACTERISTICS

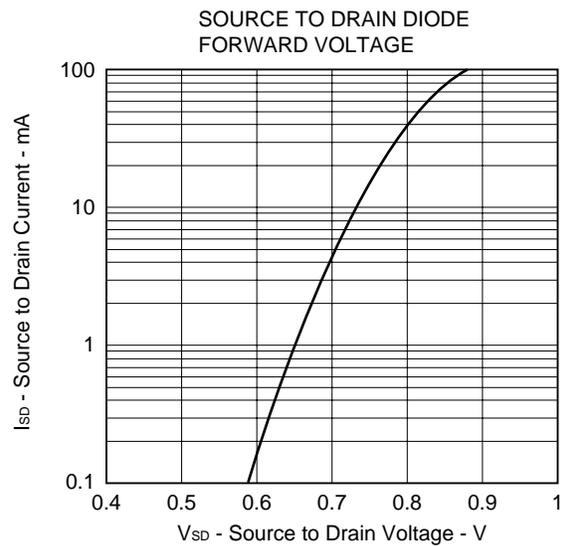
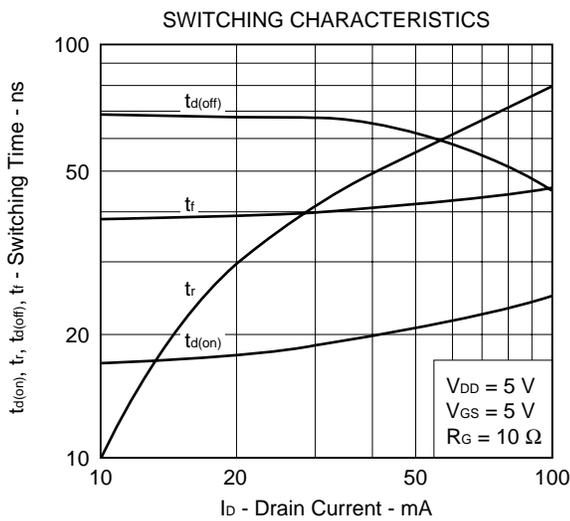
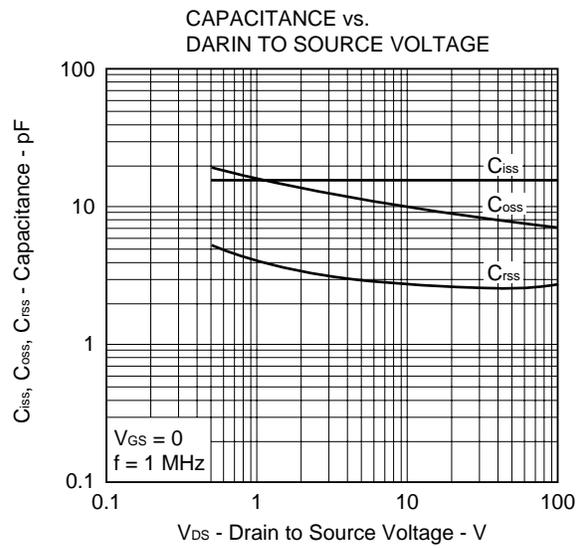
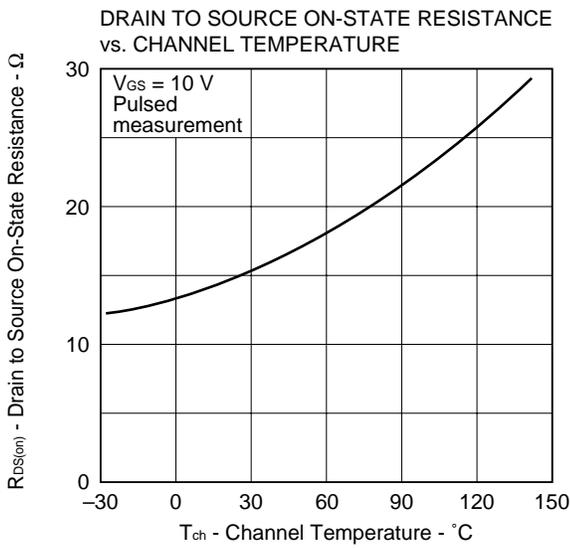
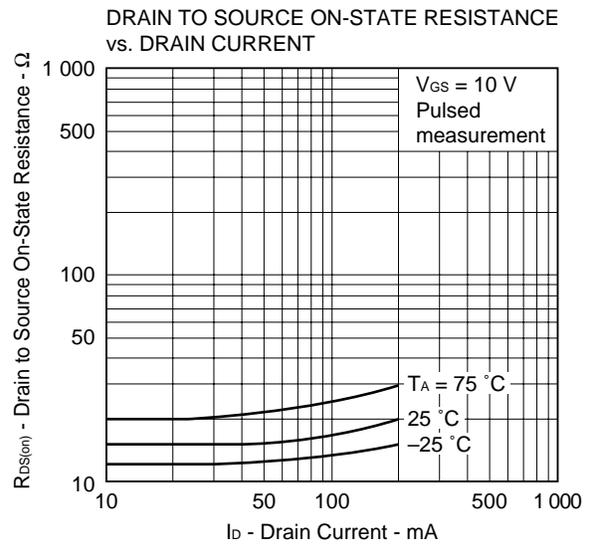
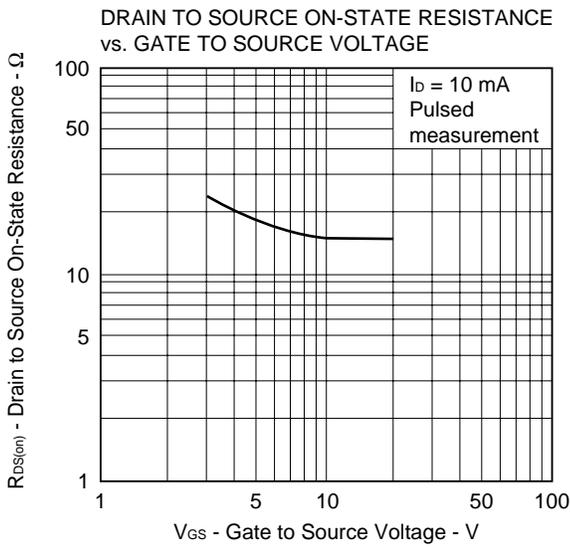


GATE TO SOURCE CUT-OFF VOLTAGE vs. CHANNEL TEMPERATURE



FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT





## 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.