

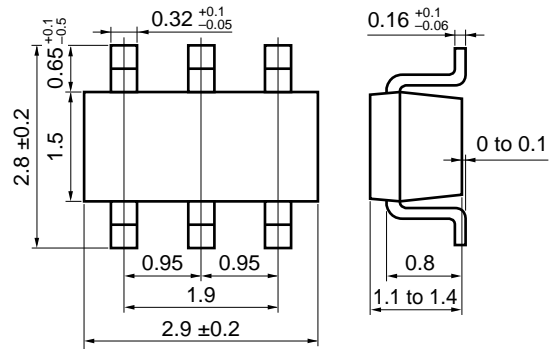
P-CHANNEL MOS FET (6-PIN 2 CIRCUITS)

The μ PA603T is a mini-mold device provided with two MOS FET circuits. It achieves high-density mounting and saves mounting costs.

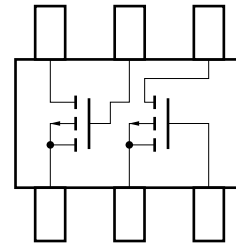
FEATURES

- Two MOS FET circuits in package the same size as SC-59
- Complement to μ PA602T
- Automatic mounting supported

PACKAGE DIMENSIONS (in millimeters)



PIN CONNECTION (Top view)



ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|-------------------------|------------------------|-------------|------|
| Drain to Source Voltage | V _{DSS} | -50 | V |
| Gate to Source Voltage | V _{GSS} | ±16 | 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 | °C |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

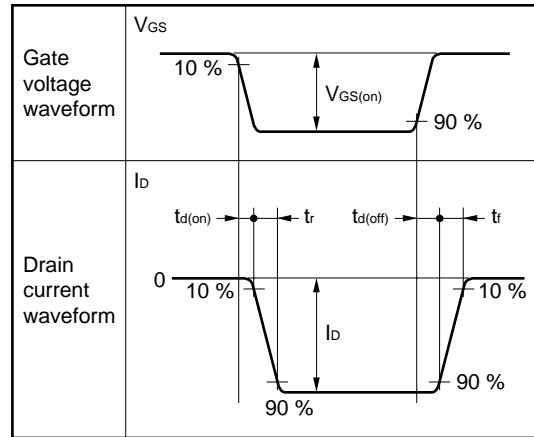
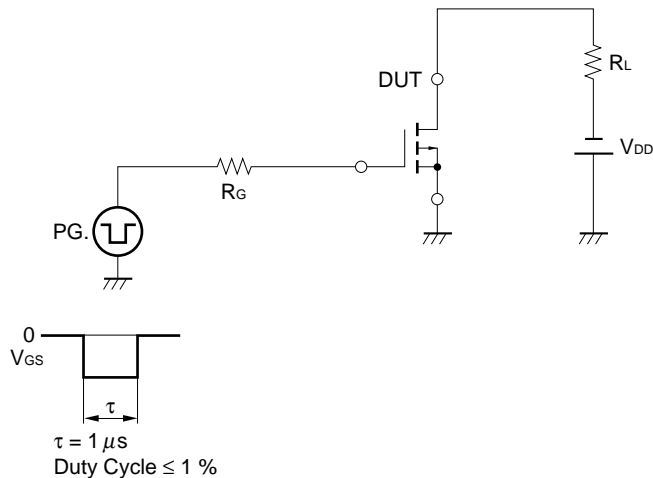
* PW ≤ 10 ms, Dury Cycle ≤ 50 %

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|-------------------------------------|----------------------|---|------|------|------|------|
| Drain Cut-off Current | I _{DSS} | V _{DS} = -50 V, V _{GS} = 0 | - | - | -1.0 | μA |
| Gate Leakage Current | I _{GSS} | V _{GS} = ±16 V, V _{DS} = 0 | - | - | ±1.0 | μA |
| Gate Cut-off Voltage | V _{GS(off)} | V _{DS} = -5.0 V, I _D = -1.0 μA | -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 | Ω |
| Drain to Source On-State Resistance | R _{DS(on)2} | V _{GS} = -10 V, I _D = -10 mA | - | 40 | 60 | Ω |
| Input Capacitance | C _{iss} | V _{DS} = -5.0 V, V _{GS} = 0, f = 1.0 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 Ω, V _{DD} = -5.0 V, I _D = -10 mA, R _L = 500 Ω | - | 45 | - | ns |
| Rise Time | t _r | | - | 75 | - | ns |
| Turn-Off Delay Time | t _{d(off)} | | - | 25 | - | ns |
| Fall Time | t _f | | - | 80 | - | ns |

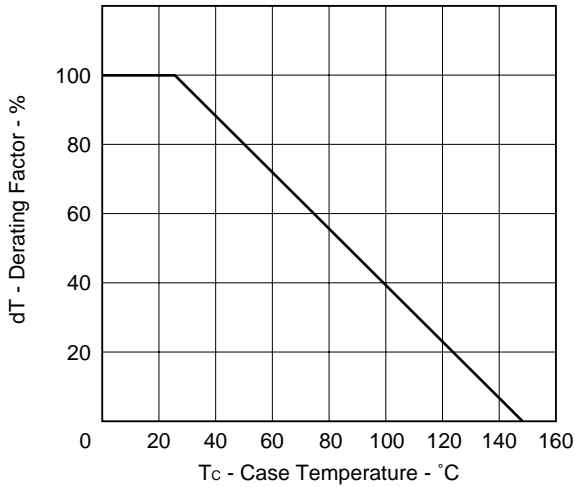
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SWITCHING TIME MEASUREMENT CIRCUIT AND CONDITIONS

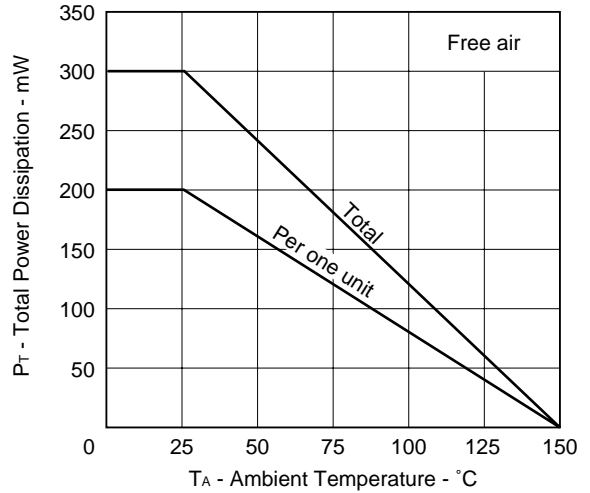


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

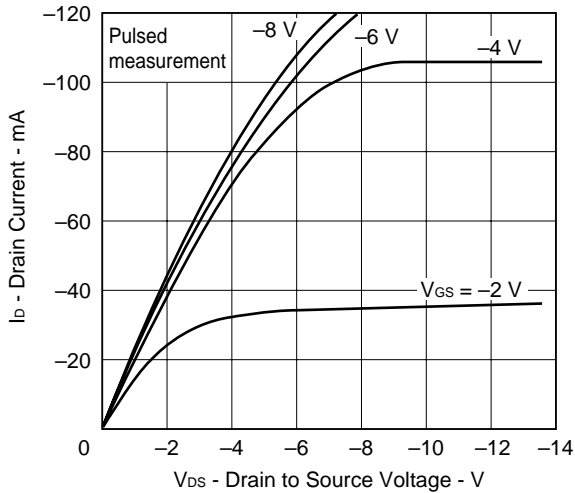
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



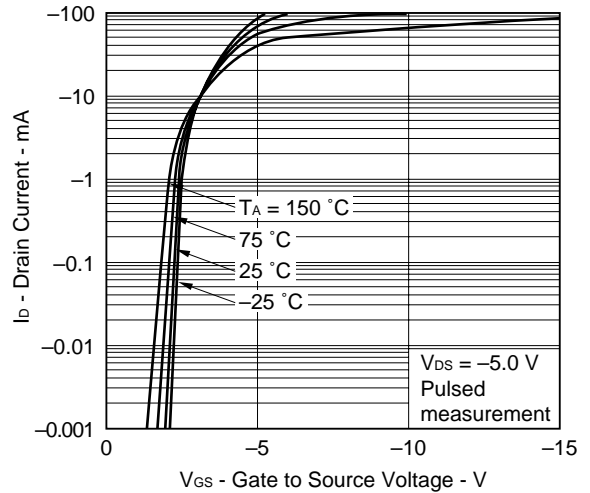
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



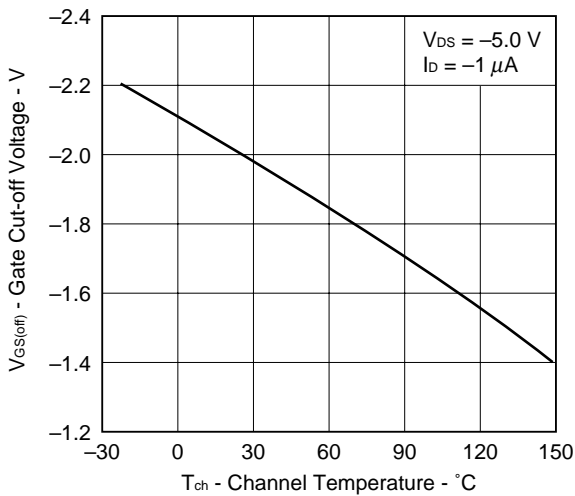
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



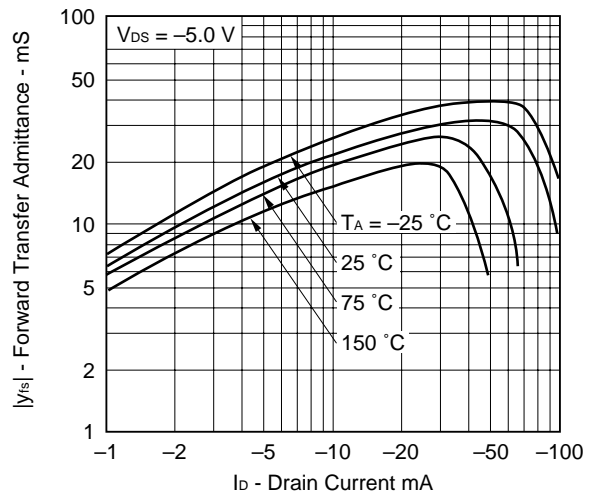
TRANSFER CHARACTERISTICS

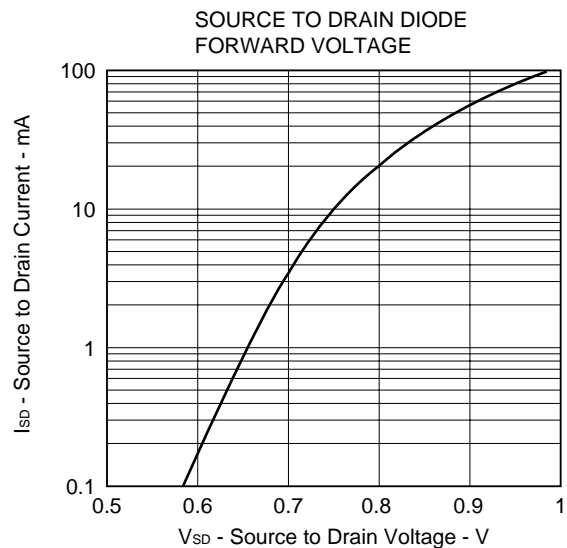
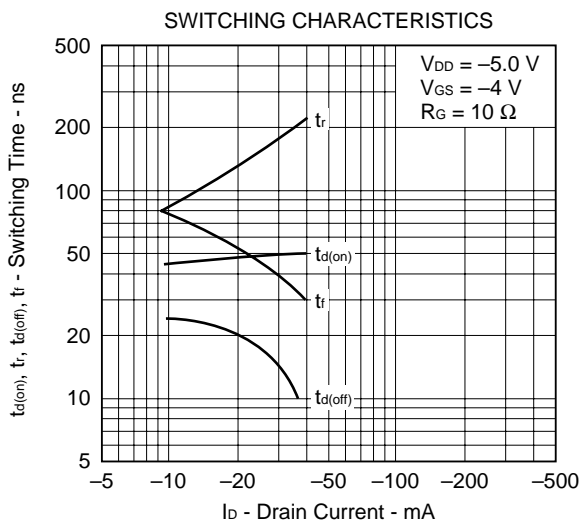
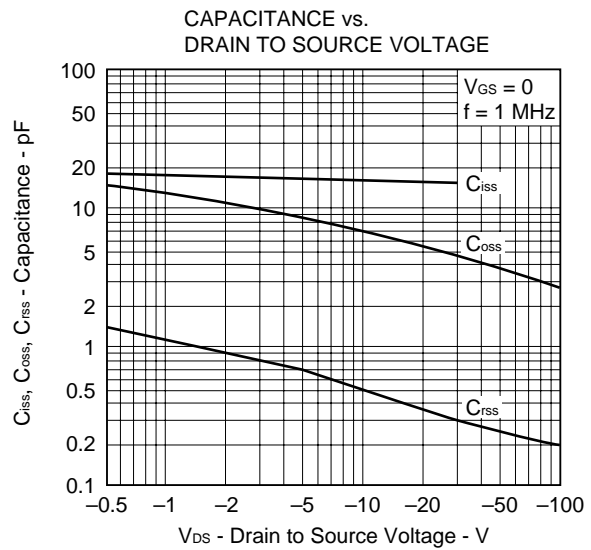
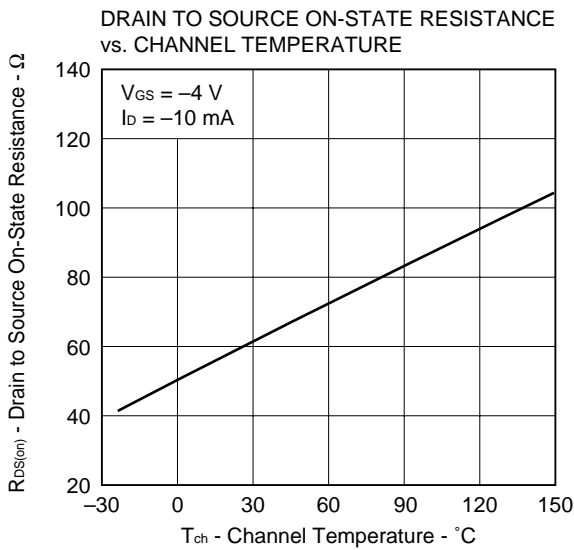
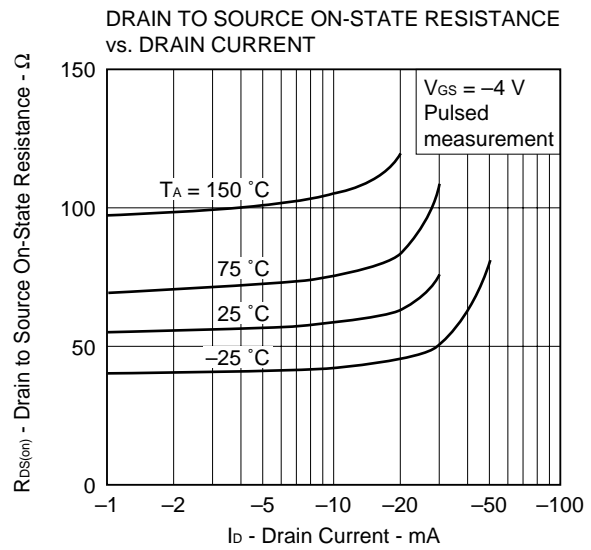
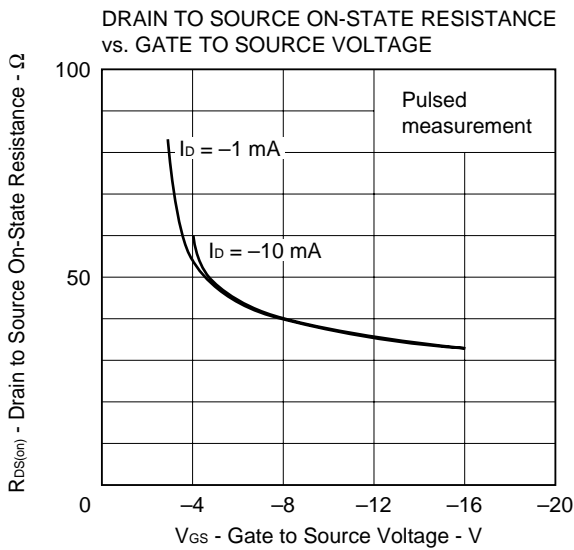


GATE TO SOURCE CUTOFF VOLTAGE vs. CHANNEL TEMPERATURE



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.