

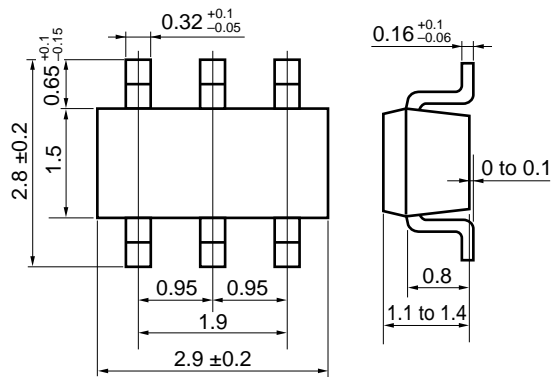
N-CHANNEL MOS FET (6-PIN 2 CIRCUITS)
 FOR SWITCHING

The μ PA606T is a mini-mold device provided with two MOS FET elements. It achieves high-density mounting and saves mounting costs.

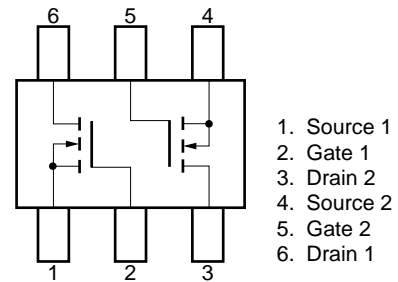
FEATURES

- Two MOS FET elements in package the same size as SC-59
- Complement to μ PA607T
- Automatic mounting supported

PACKAGE DIMENSIONS (in millimeters)



PIN CONNECTION



1. Source 1
2. Gate 1
3. Drain 2
4. Source 2
5. Gate 2
6. Drain 1

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

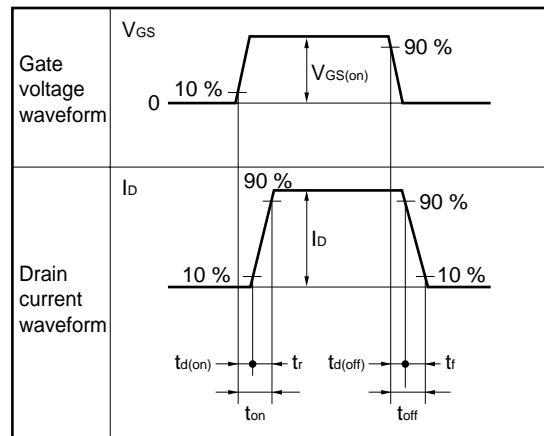
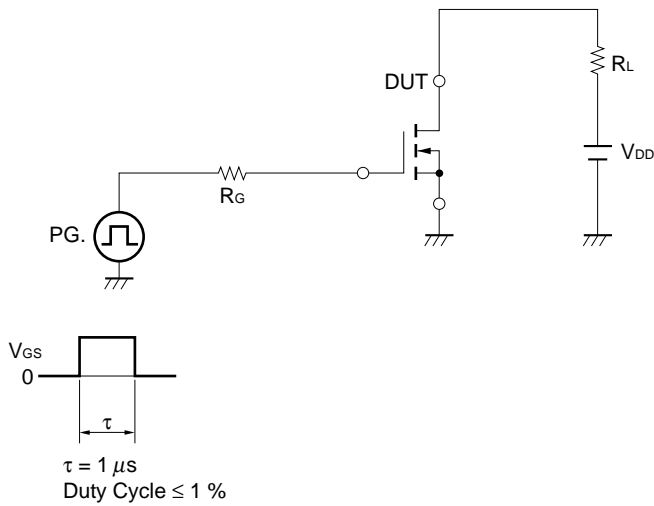
PARAMETER	SYMBOL	RATINGS	UNIT
Drain to Source Voltage	V_{DSS}	50	V
Gate to Source Voltage	V_{GSS}	± 20	V
Drain Current (DC)	$I_{D(DC)}$	100	mA
Drain Current (pulse)	$I_{D(pulse)}^*$	200	mA
Total Power Dissipation	P_T	300 (Total)	mW
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

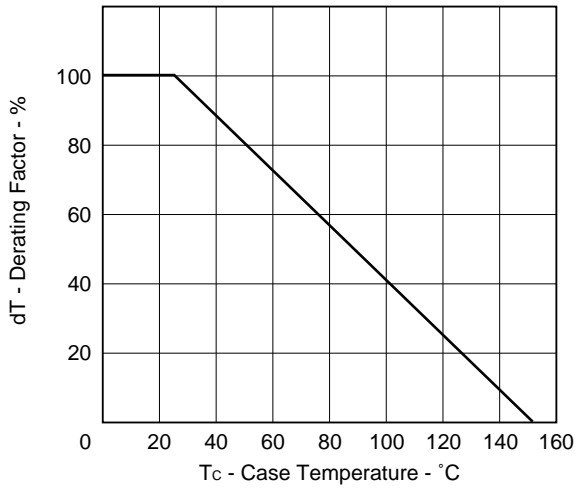
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Drain Cut-off Current	I_{DSS}	$V_{DS} = 50\text{ V}, V_{GS} = 0$	–	–	1.0	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{ V}, V_{DS} = 0$	–	–	±1.0	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 5.0\text{ V}, I_D = 1.0\ \mu\text{A}$	0.8	1.4	1.8	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5.0\text{ V}, I_D = 10\text{ mA}$	20	–	–	mS
Drain to Source On-State Resistance	$R_{DS(on)1}$	$V_{GS} = 4.0\text{ V}, I_D = 10\text{ mA}$	–	19	30	Ω
Drain to Source On-State Resistance	$R_{DS(on)2}$	$V_{GS} = 10\text{ V}, I_D = 10\text{ mA}$	–	15	25	Ω
Input Capacitance	C_{iss}	$V_{DS} = 5.0\text{ V}, V_{GS} = 0, f = 1.0\text{ MHz}$	–	16	–	pF
Output Capacitance	C_{oss}		–	12	–	pF
Reverse Transfer Capacitance	C_{rss}		–	3	–	pF
Turn-On Delay Time	$t_{d(on)}$	$V_{GS(on)} = 5.0\text{ V}, R_G = 10\ \Omega, V_{DD} = 5.0\text{ V}, I_D = 10\text{ mA}, R_L = 500\ \Omega$	–	17	–	ns
Rise Time	t_r		–	10	–	ns
Turn-Off Delay Time	$t_{d(off)}$		–	68	–	ns
Fall Time	t_f		–	38	–	ns

SWITCHING TIME MEASUREMENT CIRCUIT AND CONDITIONS (RESISTANCE LOADED)

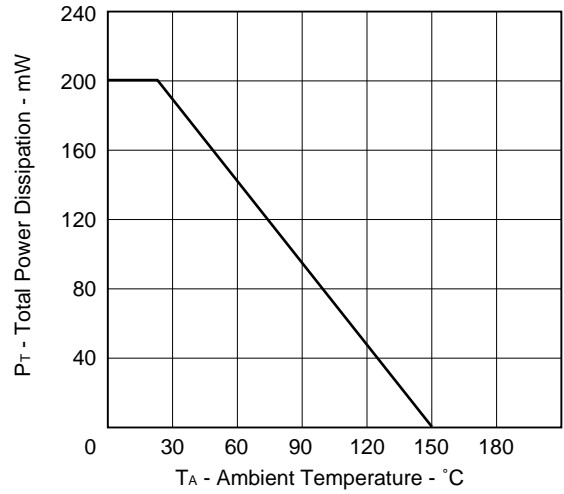


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

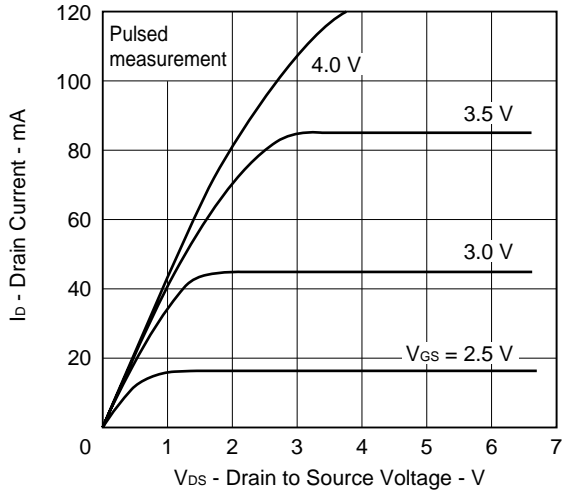
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



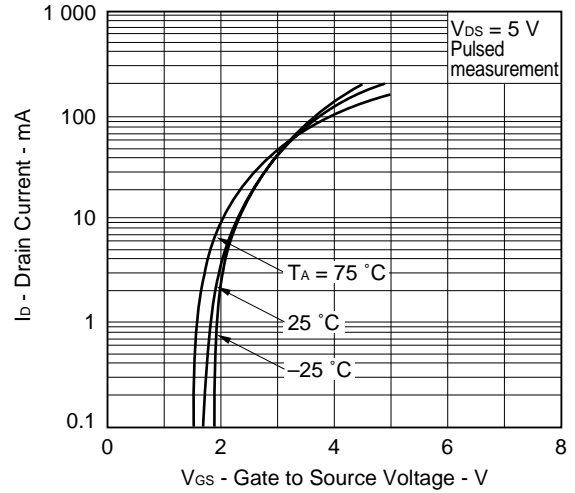
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



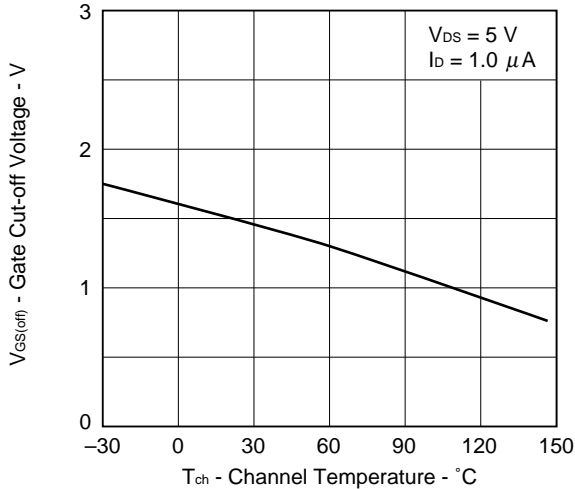
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



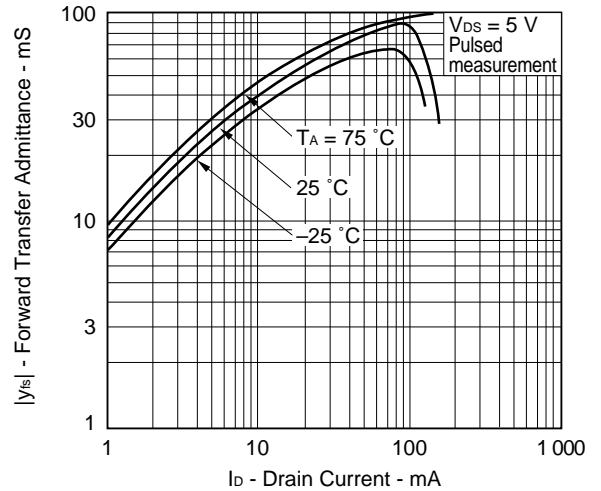
TRANSFER CHARACTERISTICS

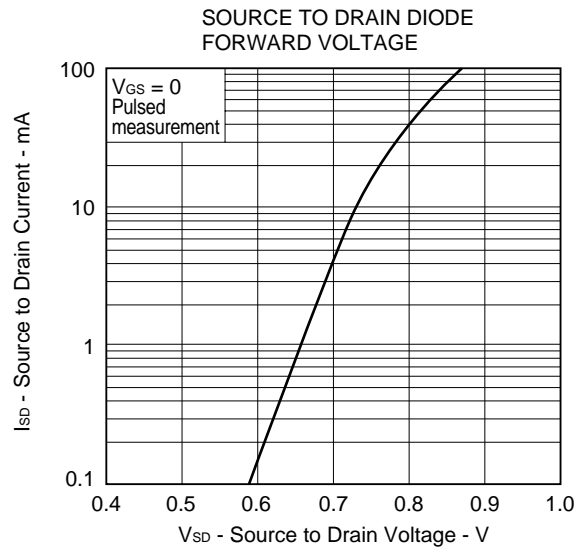
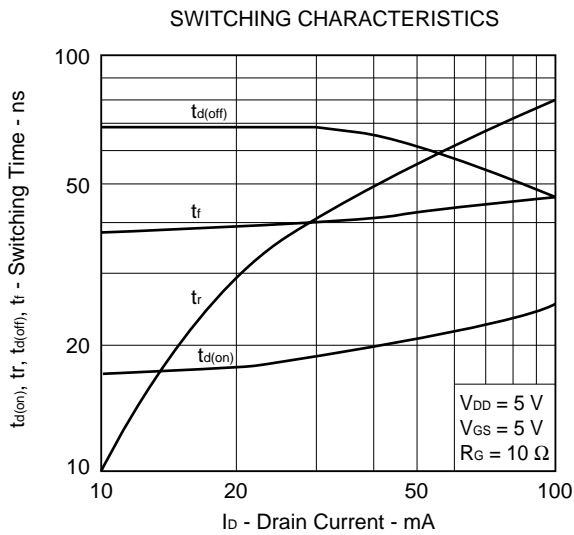
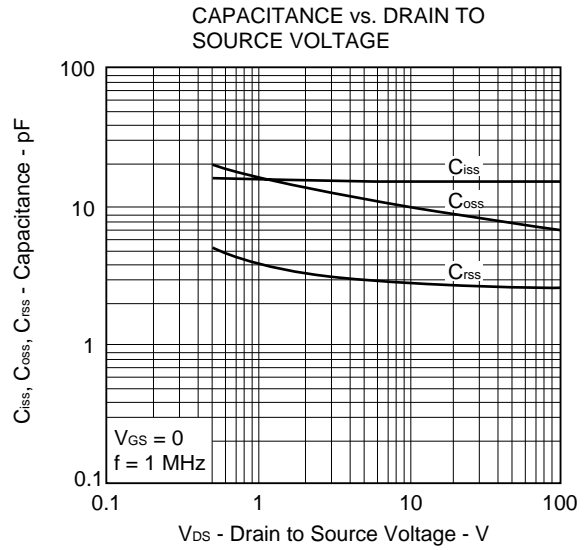
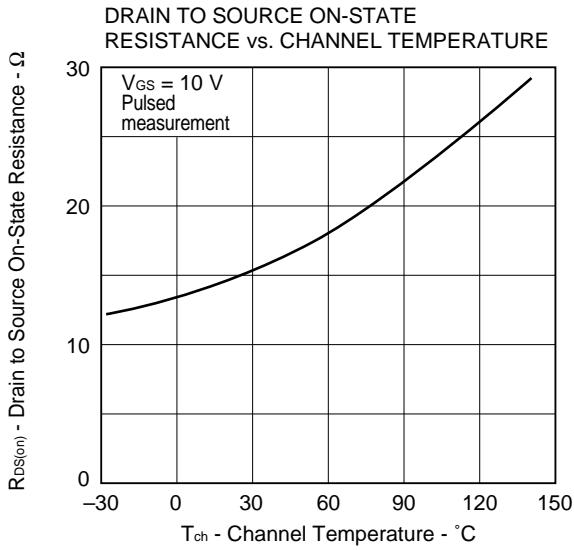
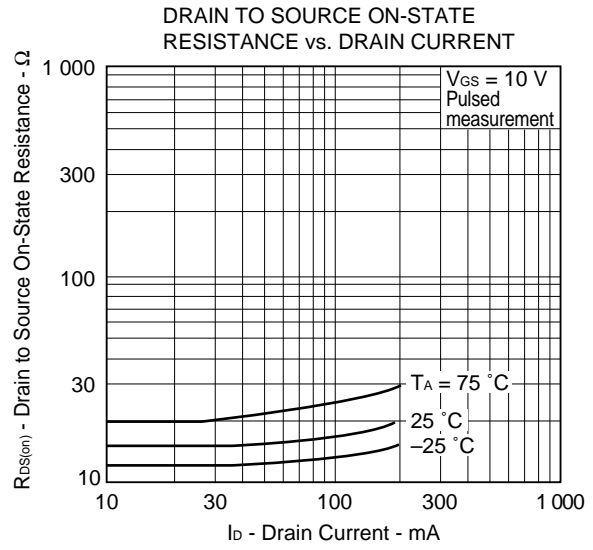
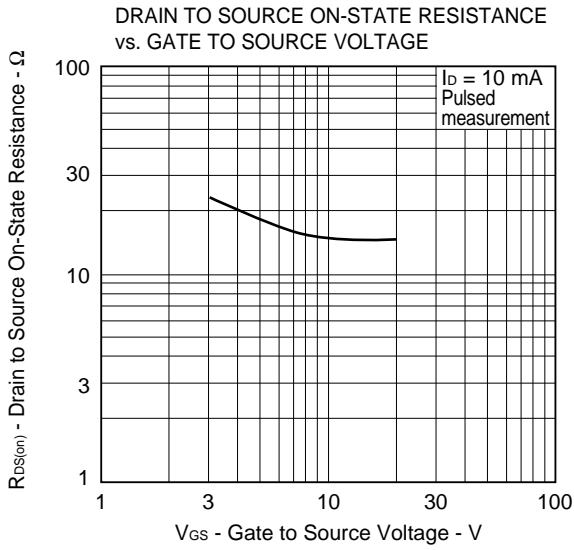


GATE TO SOURCE CUT-OFF VOLTAGE vs. CHANNEL TEMPERATURE



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.