

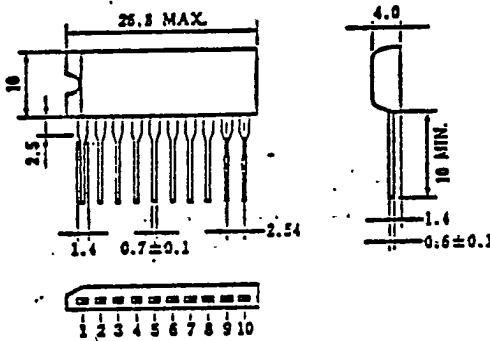


PRELIMINARY SPECIFICATION
MOS FIELD EFFECT POWER TRANSISTOR ARRAY

μ PA1520H

FAST SWITCHING
N-CHANNEL SILICON POWER MOS FET ARRAY

PACKAGE DIMENSIONS
in millimeters



2,4,8,8:Gate
3,5,7,9:Drain
1,10:Source

FEATURES

- Suitable for switching power supplies, actuator controls, and pulse circuits
- Low RDS(on)
- No second breakdown

ABSOLUTE MAXIMUM RATINGS (Ta=25 °C)

Drain to Source Voltage	VDS	30V
Gate to Source Voltage	VGS	±20V
Continuous Drain Current	ID(DC)	2A
Total Power Dissipation	PT	3.5W
Total Power Dissipation	PT†	28W
Channel Temperature	Tch	150°C
Storage Temperature	Tstg	-55~150 °C
	†Tc	25°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

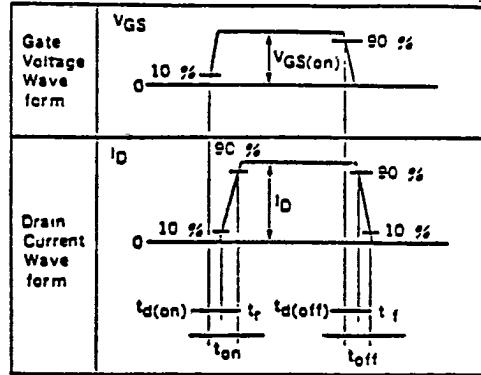
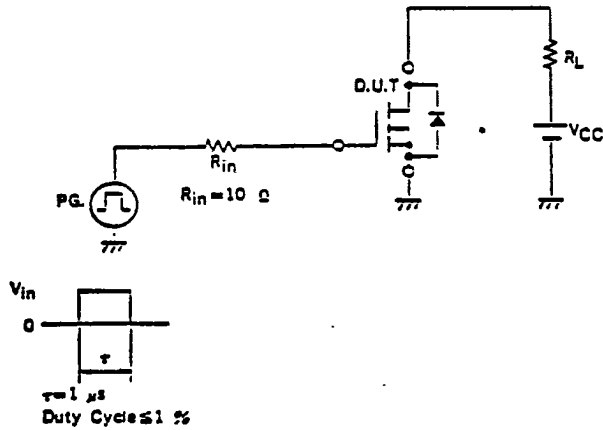
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain Leakage Current	IDSS			10	μA	VDS= 30V, VGS=0
Gate to Source Leakage Current	IGSS			100	nA	VGS=±20V, VDS=0
Gate to Source Cutoff Voltage	VGS(off)	1.0		2.5	V	VDS=10V, ID=1mA
Forward Transfer Admittance	yfs	1.0			S	VDS=10V, ID=1A
Drain to Source On-State Resistance	RDS(on)		0.11	0.17	Ω	VGS=10V, ID=1A
			0.20	0.25	Ω	VGS=4V, ID=0.8A
Input Capacitance	Ciss		500		pF	VDS=10V
Output Capacitance	Coss		120		pF	VGS=0
Reverse Transfer Capacitance	Crss		30		pF	f=1MHz
Turn-On Delay Time	t _{d(on)}		10		ns	ID=1A, Vcc=10V
Rise Time	t _r		20		ns	VGS(on)=10V
Turn-Off Delay Time	t _{d(off)}		80		ns	RL=10 Ω
Fall Time	t _f		20		ns	

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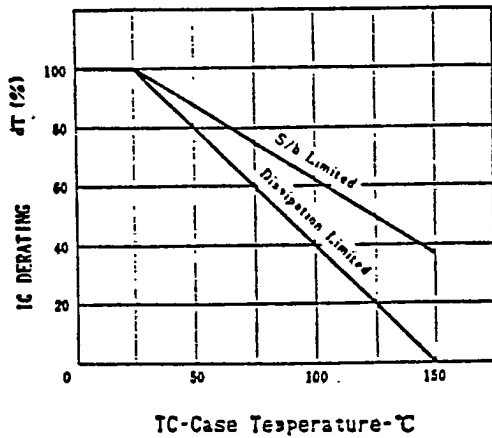
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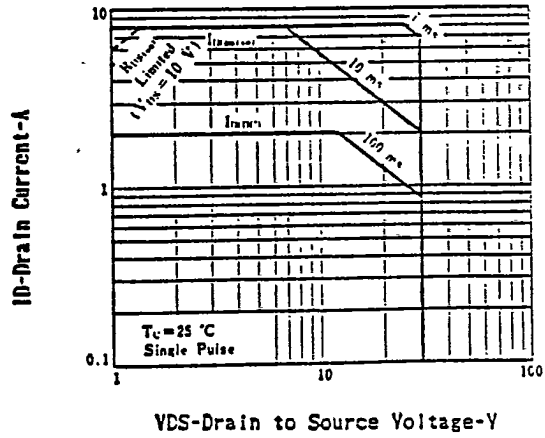
TURN-ON AND TURN-OFF TIME TEST CIRCUIT



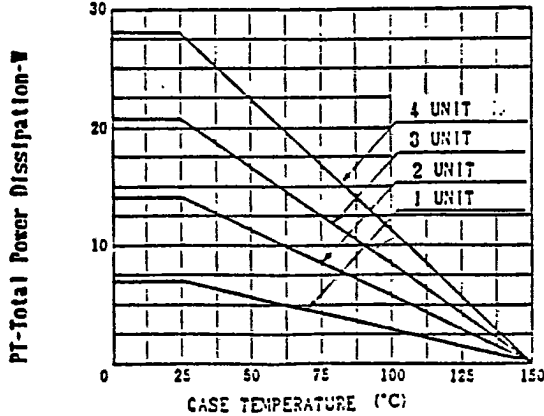
DERATING CURVE OF SAFE OPERATING AREA



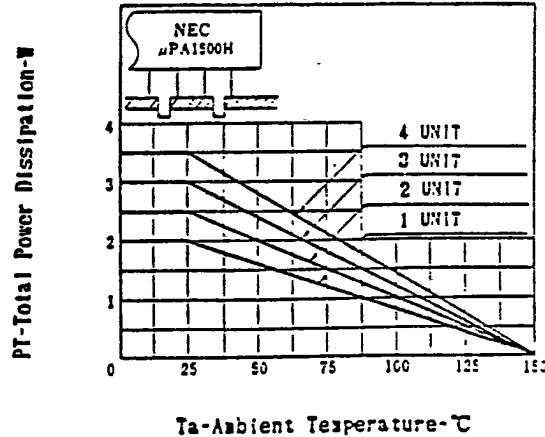
FORWARD BIAS SAFE OPERATING AREA



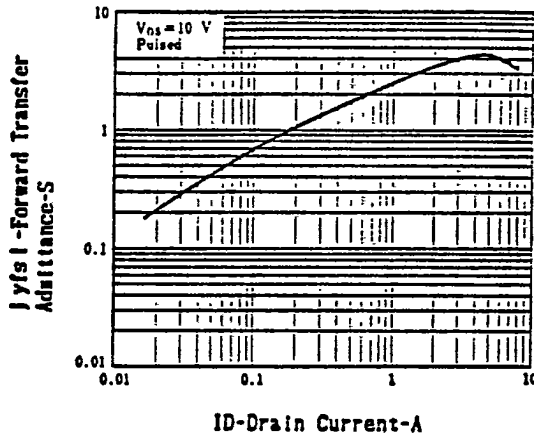
TOTAL POWER DISSIPATION vs. CASE TEMPERATURE



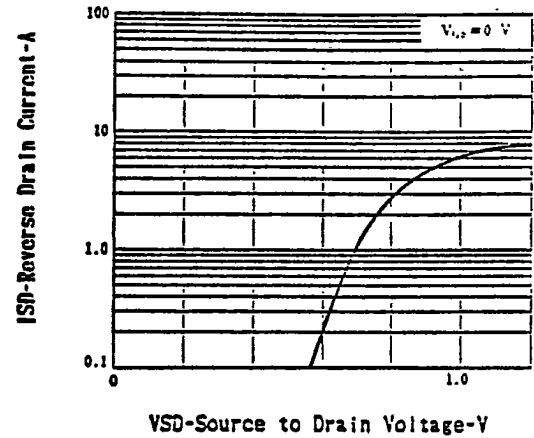
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



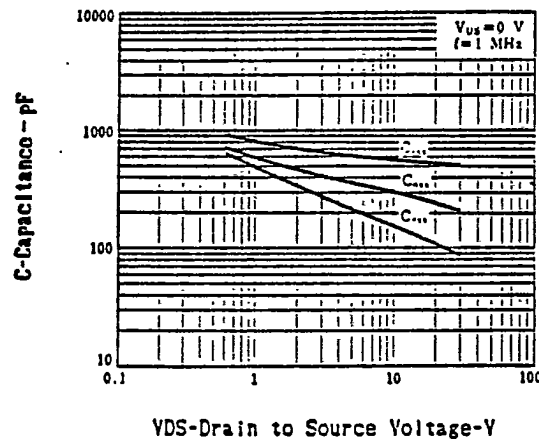
FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



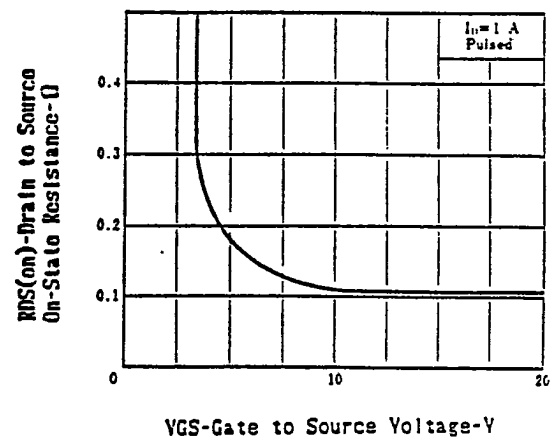
SOURCE TO DRAIN DIODE FORWARD VOLTAGE



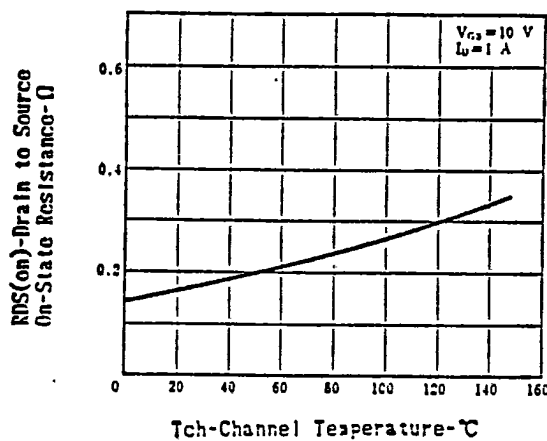
CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



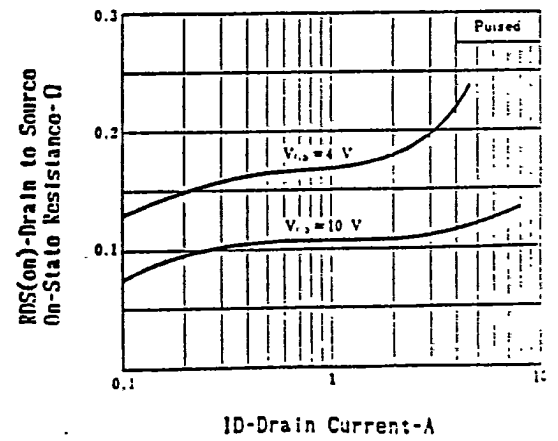
DRAIN TO SOURCE ON-STATE RESISTANCE vs. GATE TO SOURCE VOLTAGE



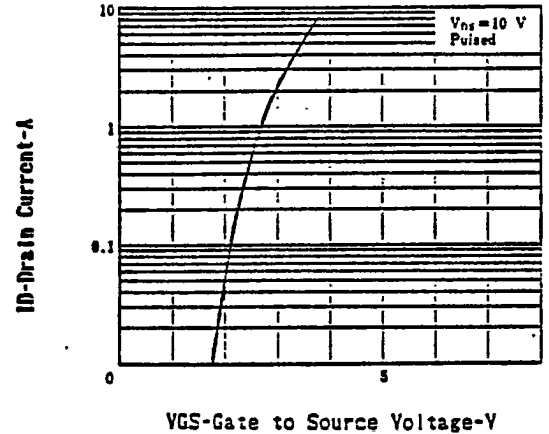
DRAIN TO SOURCE ON-STATE RESISTANCE vs. CHANNEL TEMPERATURE



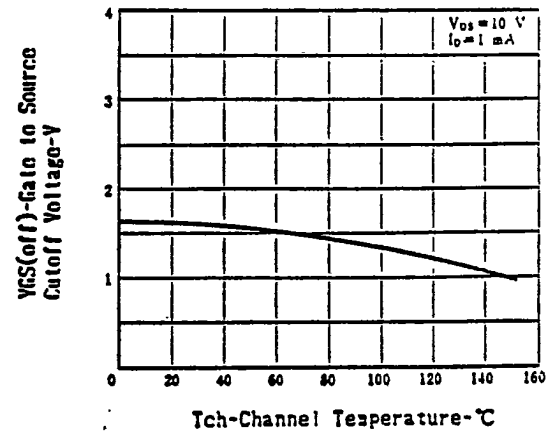
DRAIN TO SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



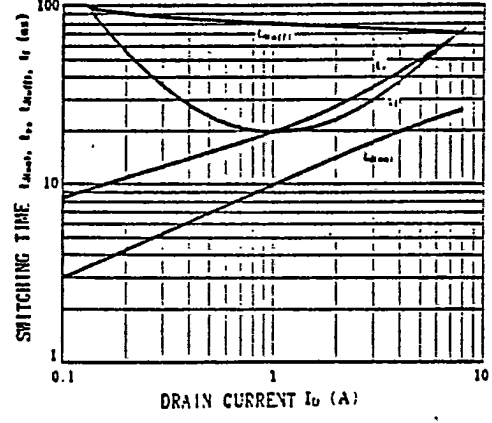
TRANSFER CHARACTERISTICS



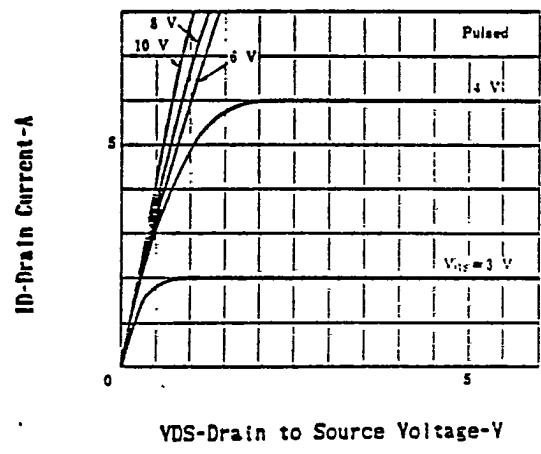
GATE TO SOURCE CUTOFF VOLTAGE vs. CHANNEL TEMPERATURE



SWITCHING CHARACTERISTICS



DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



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