



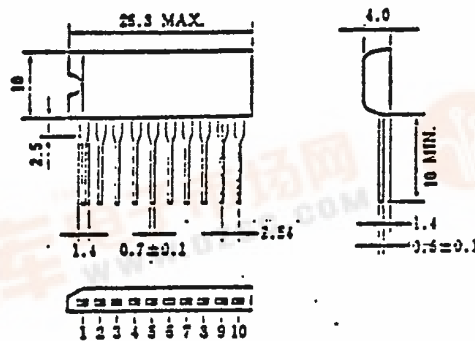
PRELIMINARY SPECIFICATION

MOS FIELD EFFECT POWER TRANSISTOR ARRAY

4 PA1572H

FAST SWITCHING
N-CHANNEL SILICON POWER MOS FET ARRAY

PACKAGE DIMENSIONS
in millimeters



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

FEATURES

- Suitable for switching power supplies, actuator controls, and pulse circuits
- Low $R_{DS(on)}$
- No second breakdown

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

- Drain to Source Voltage V_{DS} 60V
- Gate to Source Voltage V_{GS} $\pm 20\text{V}$
- Continuous Drain Current $I_D(DC)$ 2A
- Total Power Dissipation P_T 3.5W
- Total Power Dissipation P_T 22W
- Channel Temperature T_{ch} 150°C
- Storage Temperature T_{stg} -55~150°C
- $\theta_{JC}=25^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

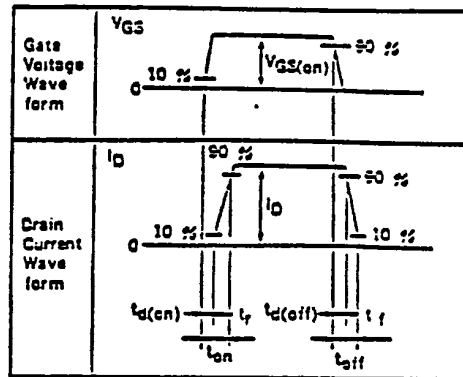
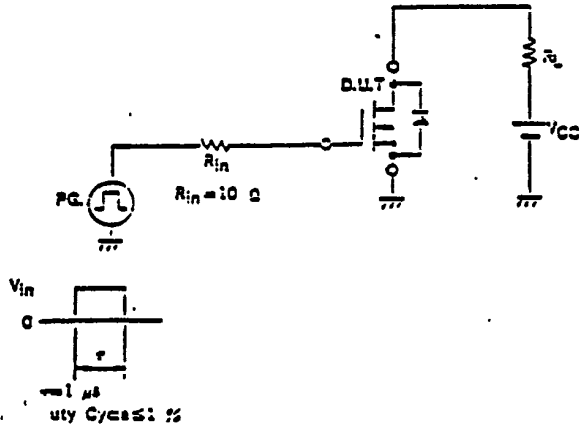
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain Leakage Current	I_{DSS}			10	μA	$V_{DS}=60\text{V}, V_{GS}=0$
Gate to Source Leakage Current	I_{GSS}			± 100	nA	$V_{GS}=\pm 20\text{V}, V_{DS}=0$
Gate to Source Cutoff Voltage	$V_{GS(off)}$	1.0		2.5	V	$V_{DS}=10\text{V}, I_D=1\mu\text{A}$
Forward Transfer Admittance	$ y_{fs} $	0.5			S	$V_{DS}=10\text{V}, I_D=1\text{A}$
Drain to Source On-State Resistance	$R_{DS(on)}$		0.40	0.60	Ω	$V_{GS}=10\text{V}, I_D=1\text{A}$
			0.60	0.35	Ω	$V_{GS}=4\text{V}, I_D=1\text{A}$
Input Capacitance	C_{iss}		200		pF	$V_{DS}=10\text{V}$
Output Capacitance	C_{oss}		70		pF	$V_{GS}=0$
Reverse Transfer Capacitance	C_{rss}		15		pF	$f=1\text{MHz}$
Turn-On Delay Time	$t_d(on)$		45		ns	$I_D=1\text{A}, V_{ce}=50\text{V}$
Rise Time	t_r		40		ns	$V_{GS(on)}=10\text{V}$
Turn-Off Delay Time	$t_d(off)$		450		ns	$R_L=50\Omega$
Fall Time	t_f		110		ns	



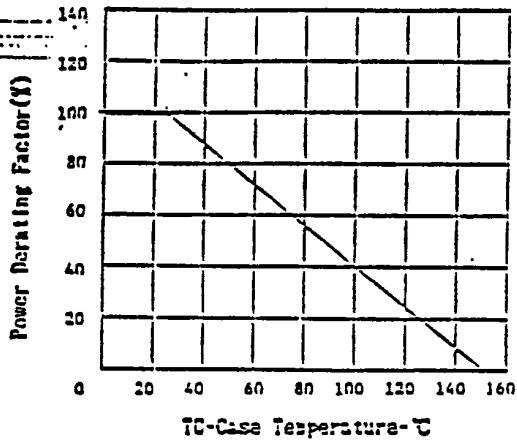
UFA1572H

NEC

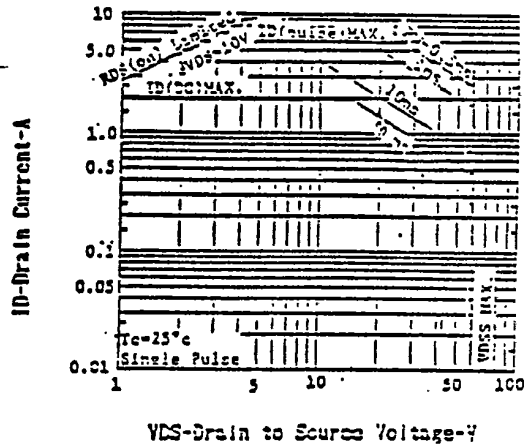
TURN-ON AND TURN-OFF TIME TEST CIRCUIT



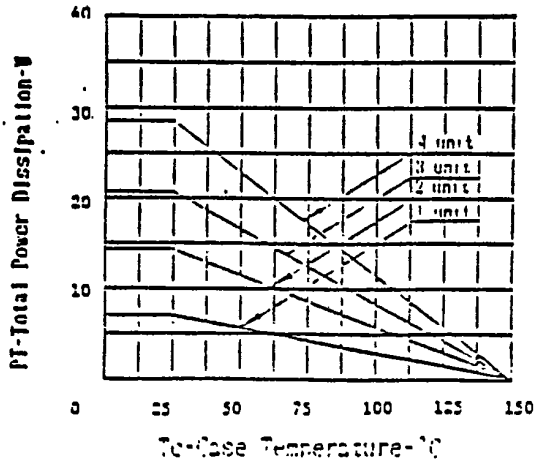
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



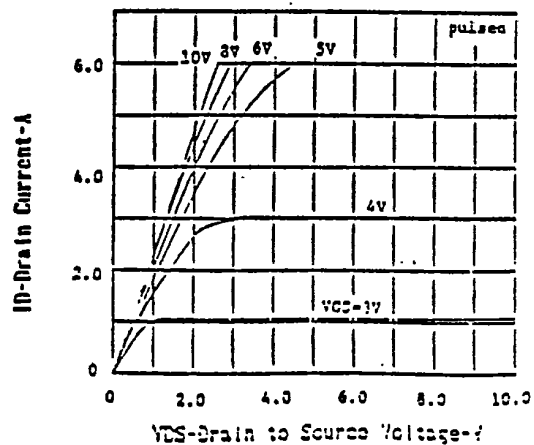
FORWARD BIAS SAFE OPERATING AREA



TOTAL POWER DISSIPATION vs. CASE TEMPERATURE



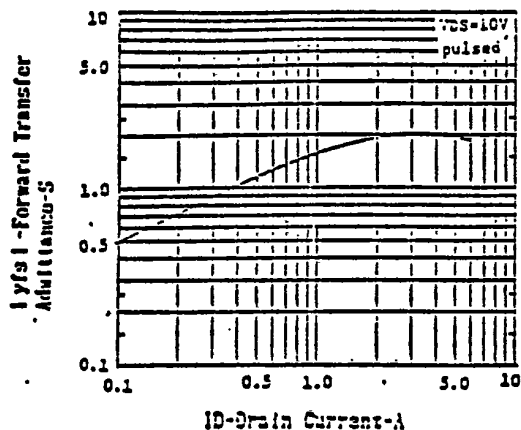
DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



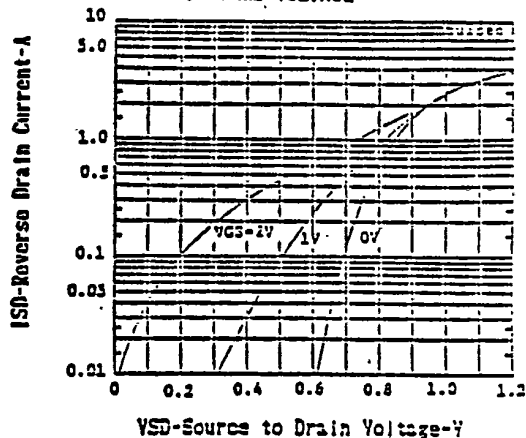
NEC ELECTRONIC DEVICE

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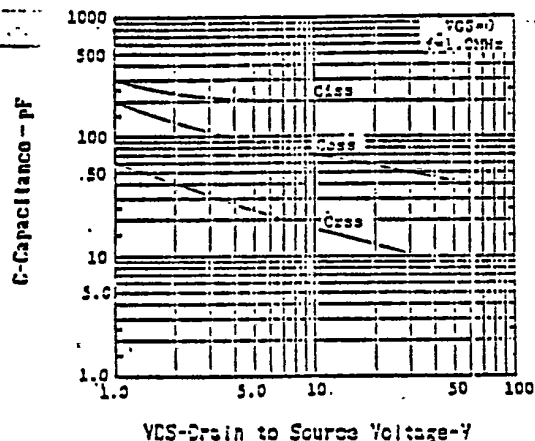
FORWARD TRANSFER ADMITTANCE
VS. DRAIN CURRENT



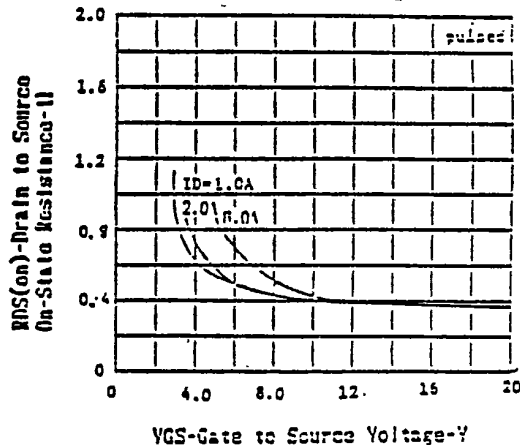
SOURCE TO DRAIN DIODE
FORWARD VOLTAGE



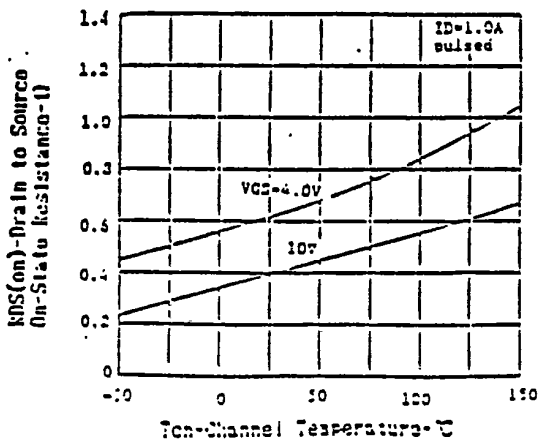
CAPACITANCE VS. DRAIN TO
SOURCE VOLTAGE



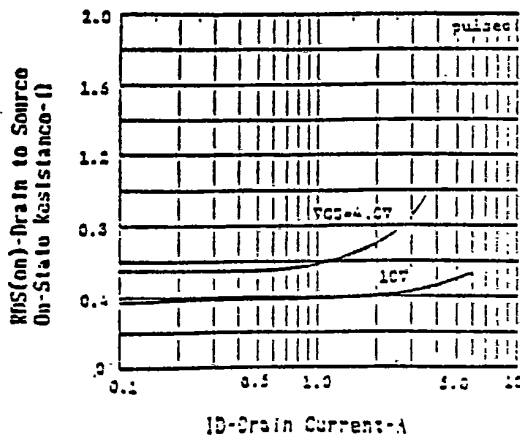
DRAIN TO SOURCE ON-STATE RESISTANCE
VS. GATE TO SOURCE VOLTAGE



DRAIN TO SOURCE ON-STATE RESISTANCE
VS. CHANNEL TEMPERATURE



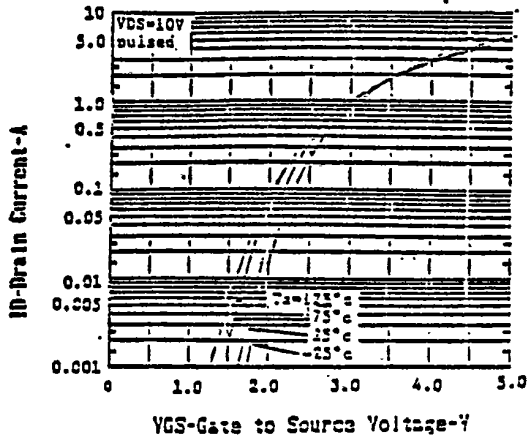
DRAIN TO SOURCE ON-STATE RESISTANCE
VS. DRAIN CURRENT



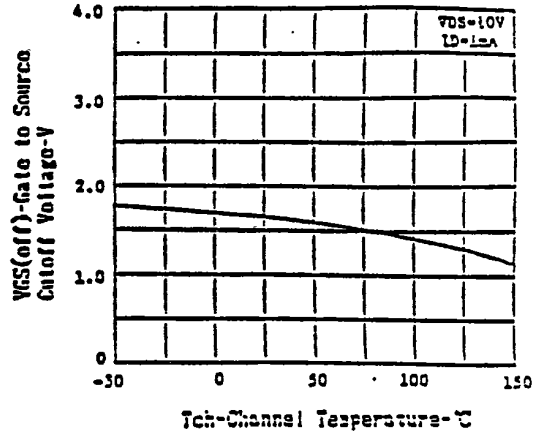
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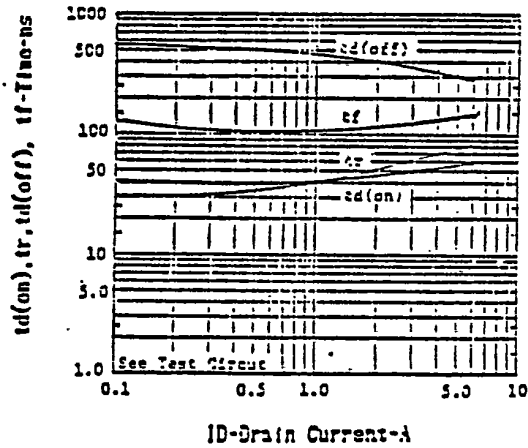
TRANSFER CHARACTERISTICS



GATE TO SOURCE CUTOFF VOLTAGE VS. CHANNEL TEMPERATURE



TURN-ON AND TURN-OFF TIME



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