



FP401

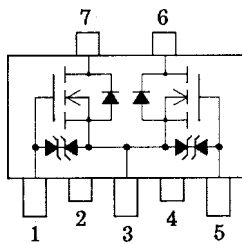
N-Channel MOS Silicon FET

Very High-Speed Switching Applications

Features

- Low ON resistance.
- Very high-speed switching.
- Composite type with 2 low-voltage-drive N-channel MOSFETs facilitating high-density mounting.

Electrical Connection



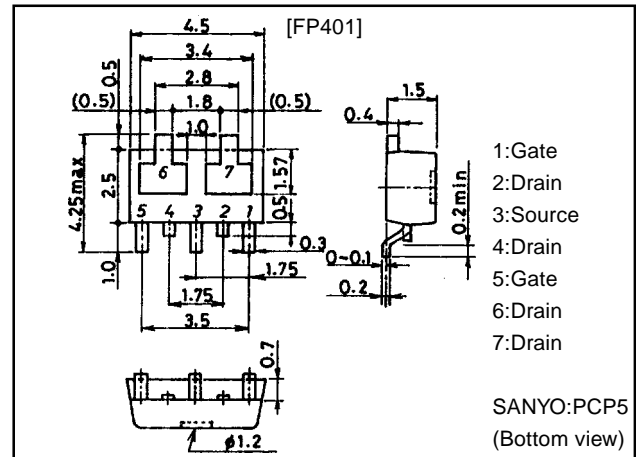
- 1: Gate
2: Drain
3: Source
4: Drain
5: Gate
6: Drain
7: Drain

(Top view)

Package Dimensions

unit:mm

2102A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		250	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		400	mA
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	1.6	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ C$, 1 unit	2.0	W
	P_D	Mounted on ceramic board (250mm \times 0.8mm) 1 unit	0.8	W
Total Power Dissipation	P_T	Mounted on ceramic board (250mm \times 0.8mm)	1.1	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Electrical Characteristics at Ta=25°C

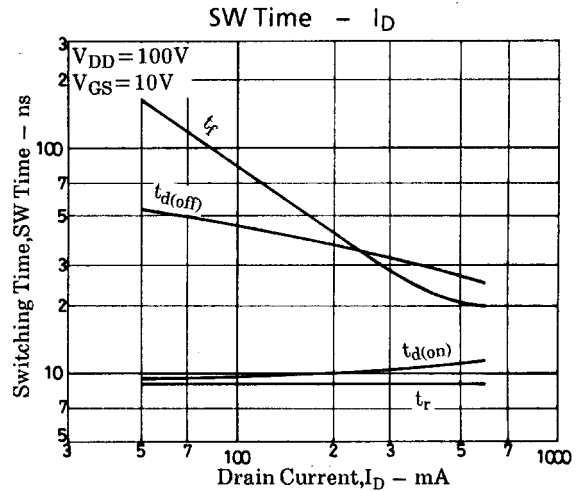
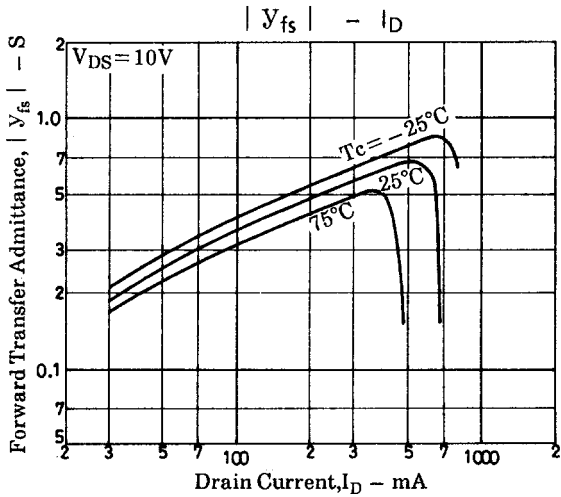
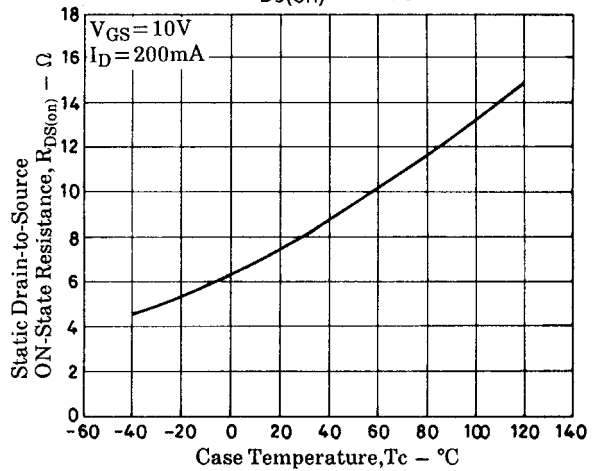
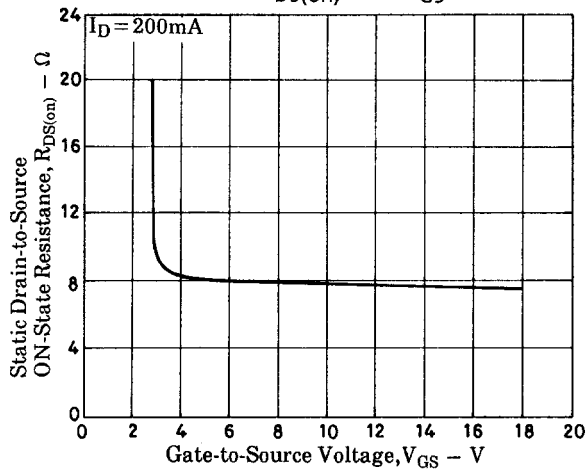
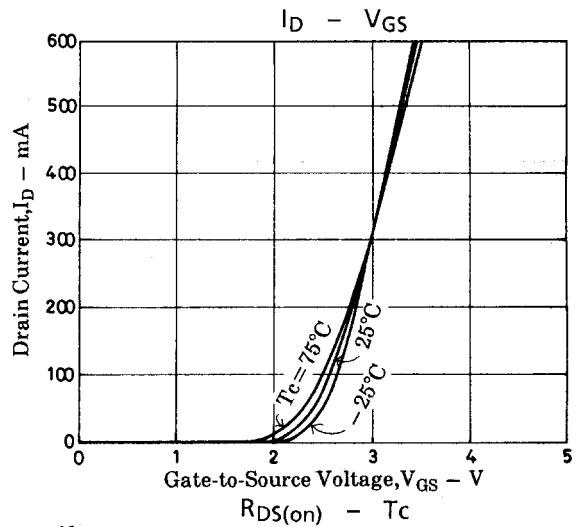
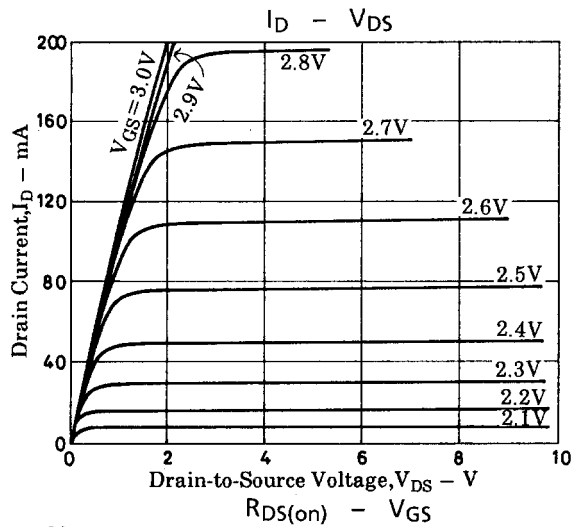
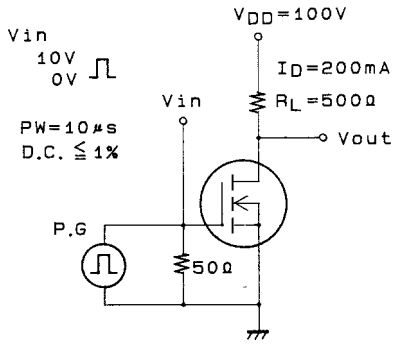
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA$, $V_{GS} = 0$	250			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 250V$, $V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 18V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	1.5		2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V$, $I_D = 200mA$	270	400		mS
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 200mA$, $V_{GS} = 10V$		8	12	Ω
Input Capacitance	C_{iss}	$V_{DS} = 20V$, $f = 1MHz$		37		pF
Output Capacitance	C_{oss}	$V_{DS} = 20V$, $f = 1MHz$		10		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 20V$, $f = 1MHz$		4		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		35		ns
Fall Time	t_f	See specified Test Circuit		45		ns
Diode Forward Voltage	V_{SD}	$I_S = 400mA$, $V_{GS} = 0$		1.0		V

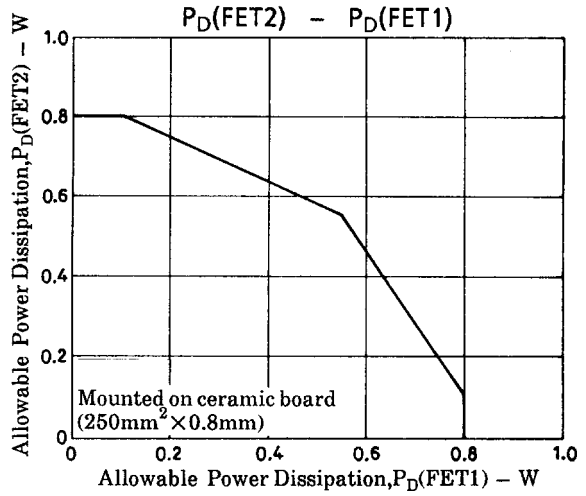
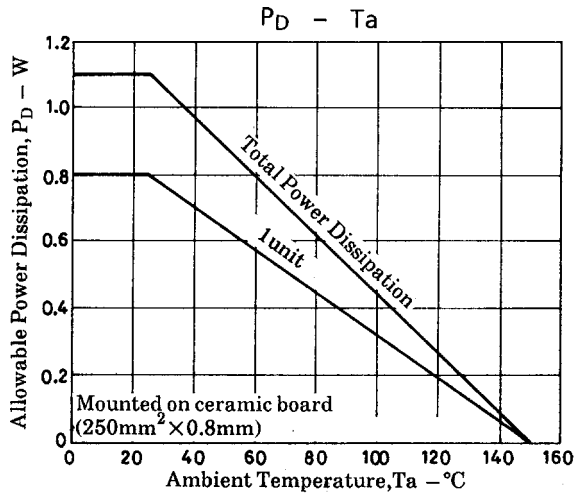
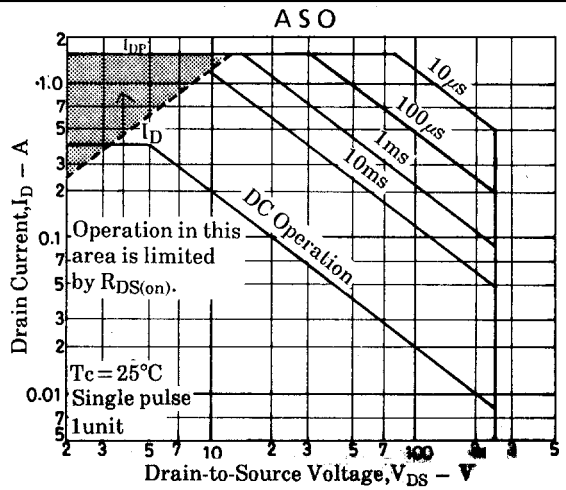
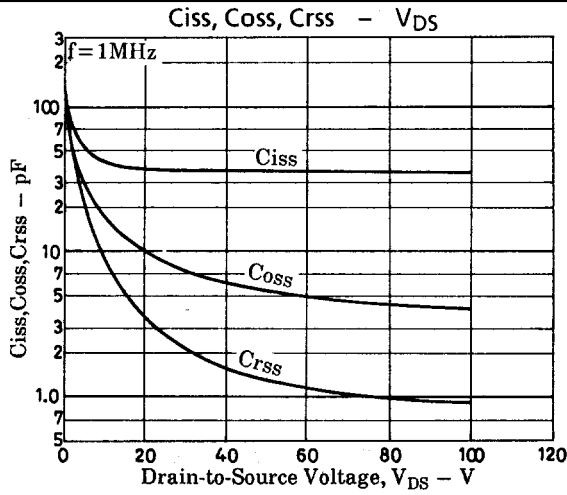
Marking:401

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Switching Time Test Circuit





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