



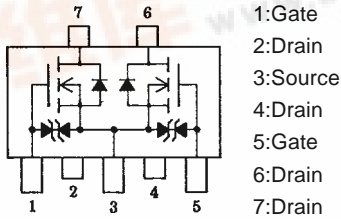
FP402

N-Channel MOS Silicon FET Very High-Speed Switching Applications

Features

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

Electrical Connection



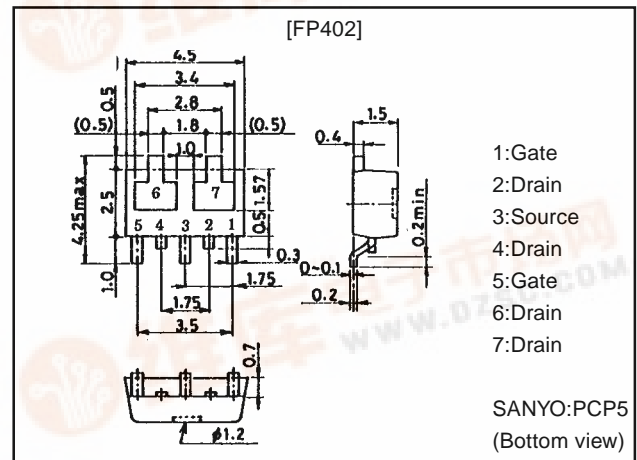
- 1: Gate
- 2: Drain
- 3: Source
- 4: Drain
- 5: Gate
- 6: Drain
- 7: Drain

(Top view)

Package Dimensions

unit:mm

2102A



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

SANYO:PCP5
(Bottom view)

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		20	V
Gate-to-Source Voltage	V_{GSS}		± 15	V
Drain Current (DC)	I_D		1	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	4	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	$^\circ C$

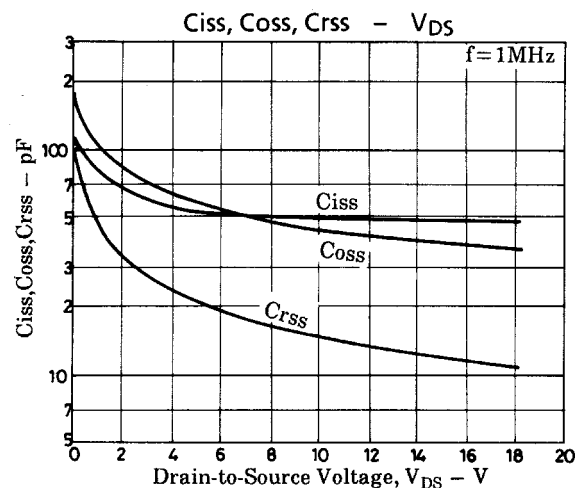
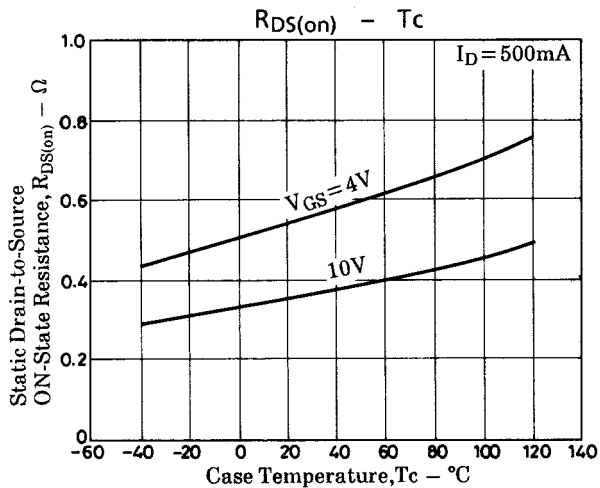
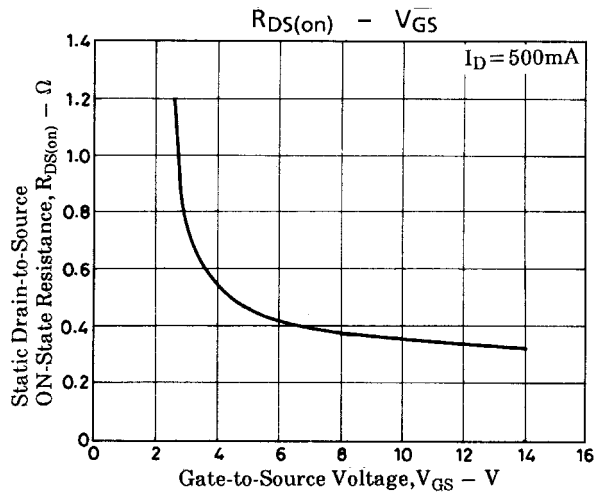
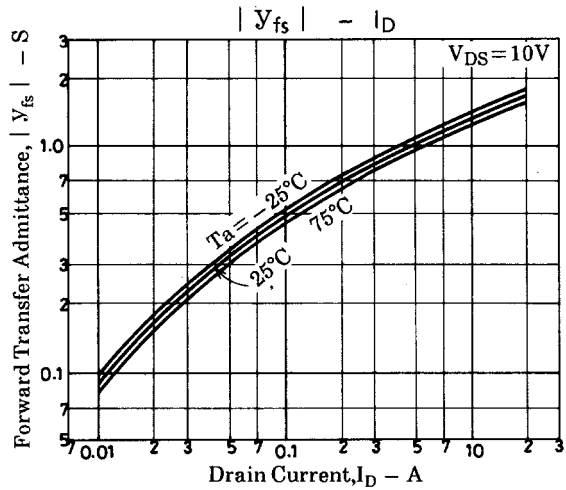
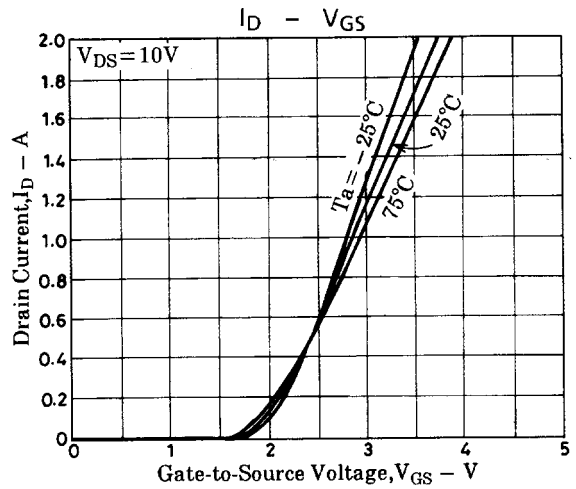
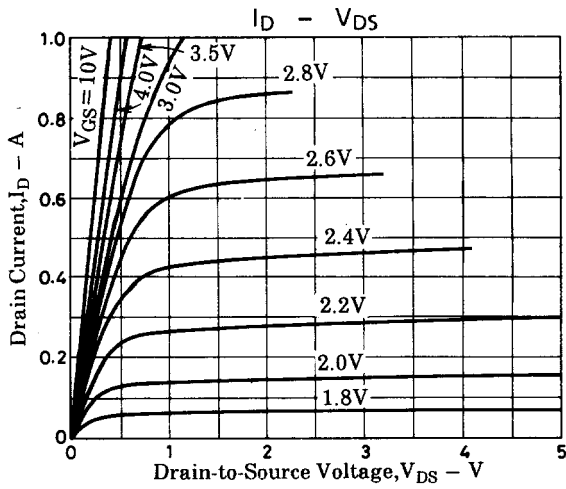
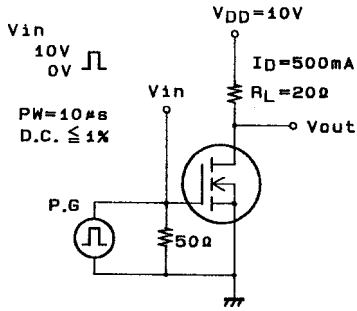
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
D-S Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1mA$, $V_{GS} = 0$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20V$, $V_{GS} = 0$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 12V$, $V_{DS} = 0$			± 10	μA
Cutoff Voltage	$V_{GSS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	0.8		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V$, $I_D = 500mA$	0.6	1.0		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	$I_D = 500mA$, $V_{GS} = 10V$		350	480	$m\Omega$
	$R_{DS(on)}$	$I_D = 500mA$, $V_{GS} = 4V$		550	750	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 10V$, $f = 1MHz$		50		pF
Output Capacitance	C_{oss}	$V_{DS} = 10V$, $f = 1MHz$		45		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10V$, $f = 1MHz$		15		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		8		ns
Rise Time	t_r	See specified Test Circuit		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		30		ns
Fall Time	t_f	See specified Test Circuit		20		ns
Diode Forward Voltage	V_{SD}	$I_S = 1A$, $V_{GS} = 0$		1.0		V

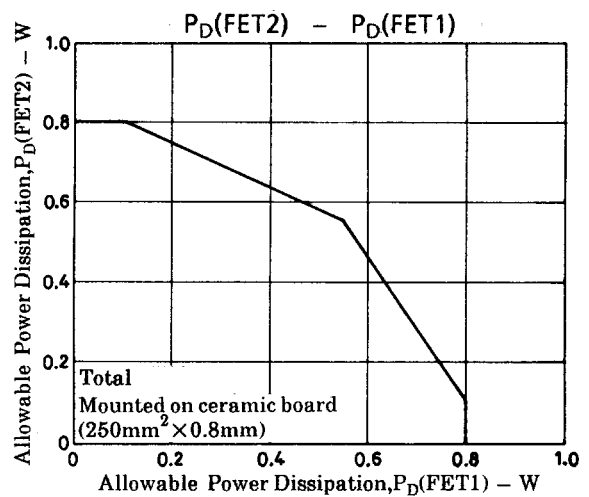
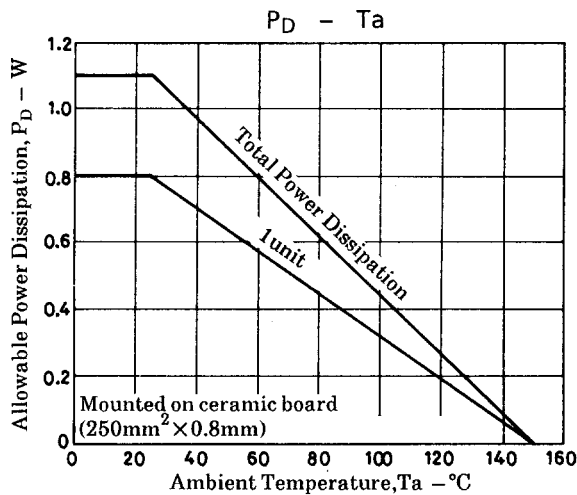
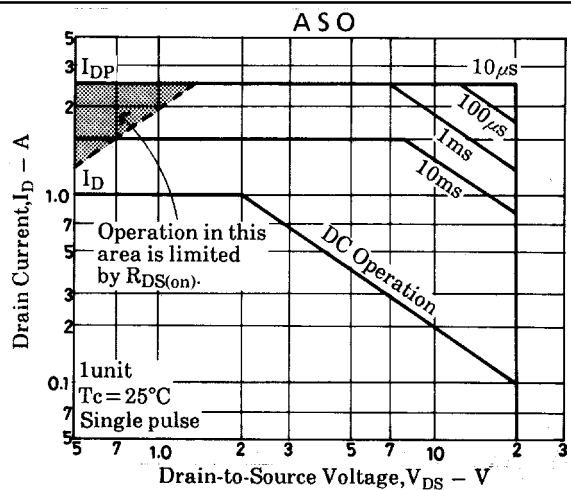
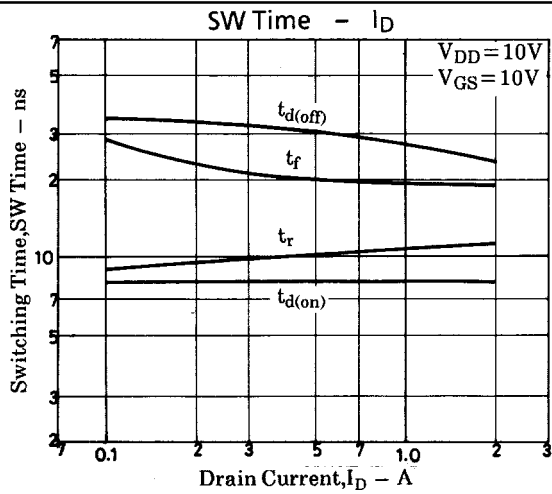


FP402

Switching Time Test Circuit



FP402



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