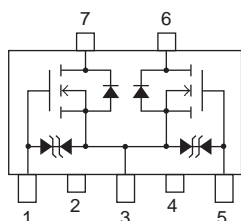


SANYO**FP402****Ultrahigh-Speed Switching Applications****Features**

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

Electrical Connection

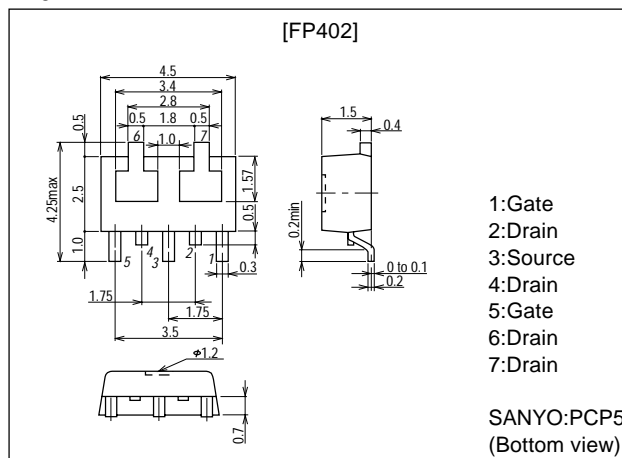
- 1:Gate
2:Drain
3:Source
4:Drain
5:Gate
6:Drain
7:Drain

(Top view)

Package Dimensions

unit:mm

2102A

**Specifications****Absolute Maximum Ratings** at $T_a = 25^\circ\text{C}$

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}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	4	A
Allowable Power Dissipation	P_D	$T_c = 25^\circ\text{C}$, 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	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

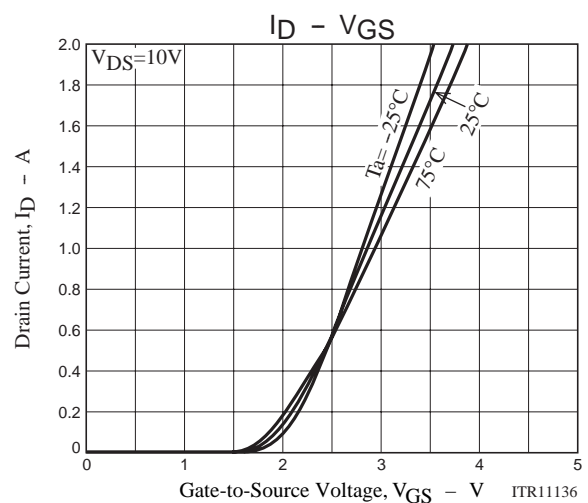
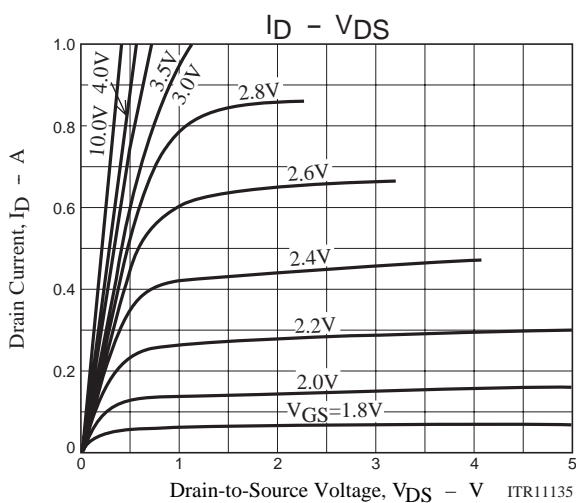
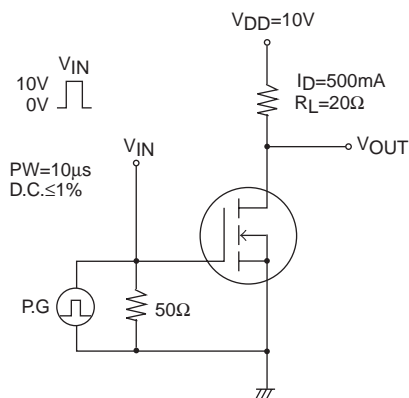
FP402

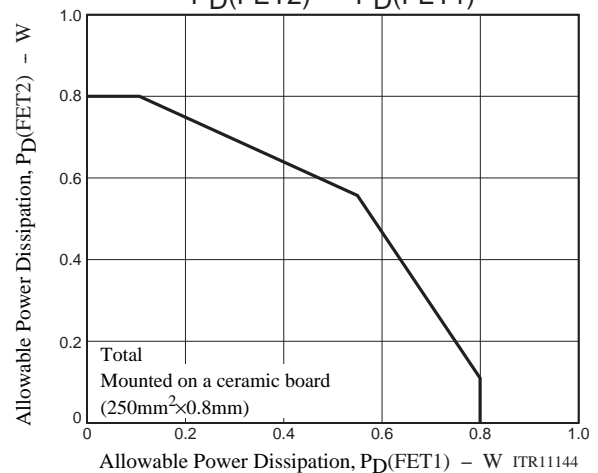
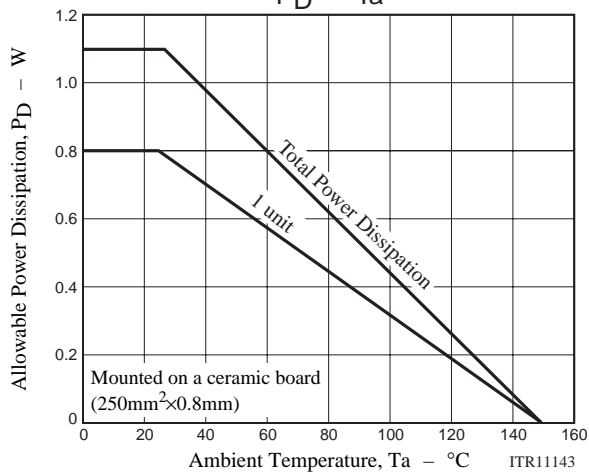
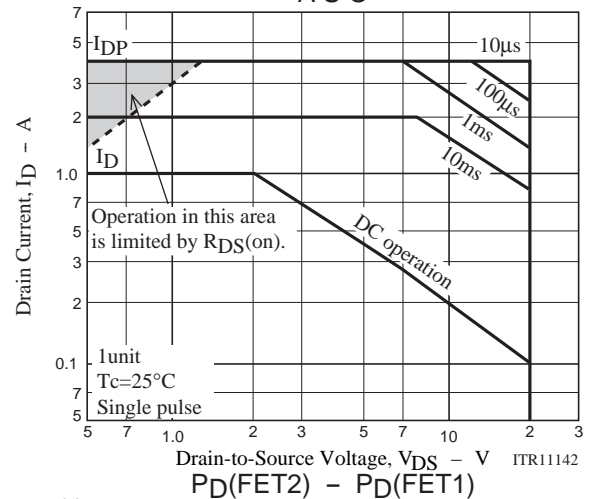
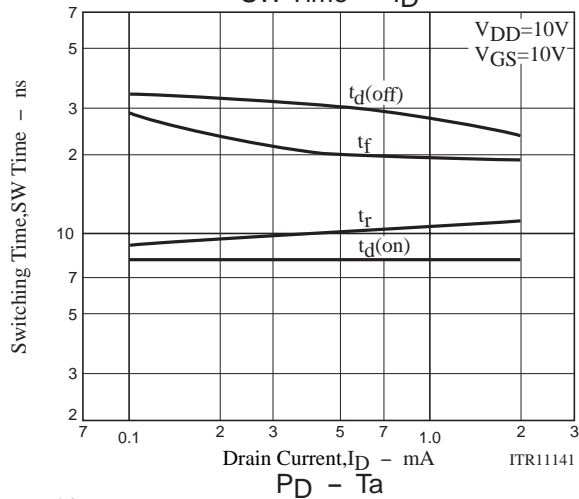
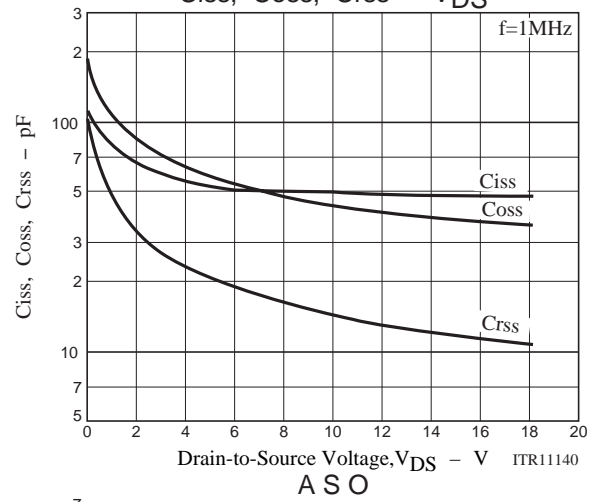
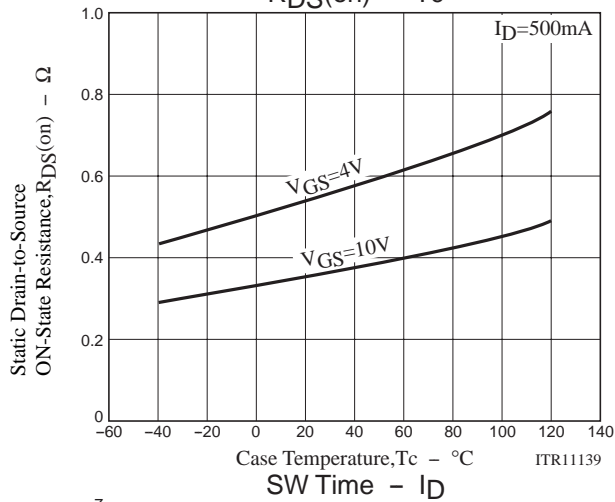
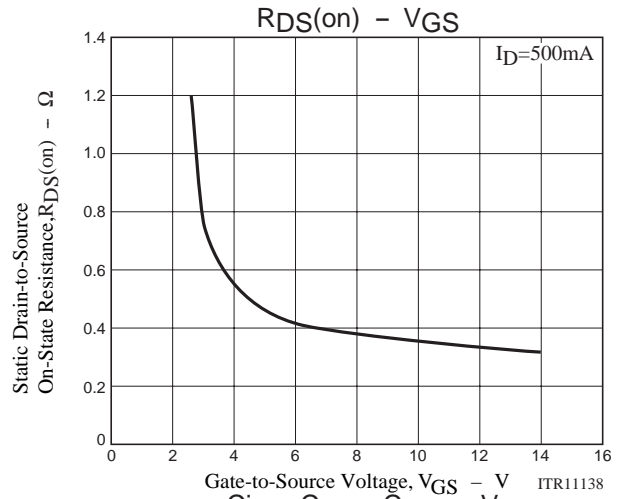
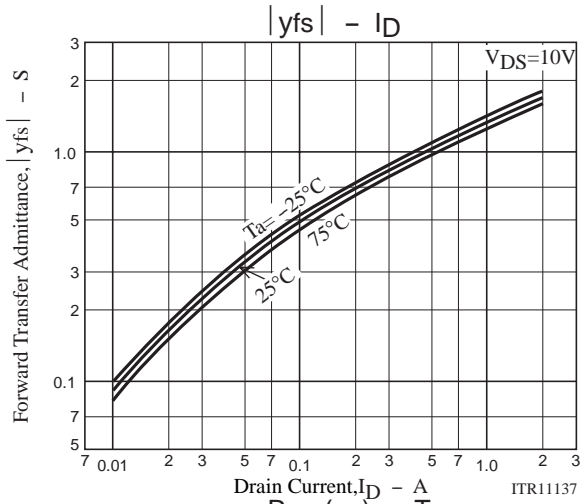
Electrical Characteristics at Ta=25°C

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	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	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

Marking:402

Switching Time Test Circuit





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