

**FTD2017A**

## Load Switching Applications

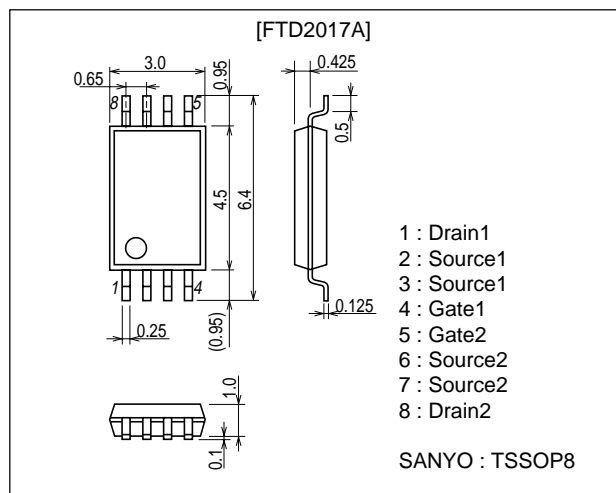
### Features

- Low ON-resistance.
- 2.5V drive.
- Mounting height 1.1mm
- Composite type, facilitating high-density mounting.
- Drain common specifications.

### Package Dimensions

unit : mm

2155A



### 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	$V_{GSS}$		$\pm 12$	V
Drain Current (DC)	$I_D$		6	A
Drain Current (Pulse)	$I_{DP}$	PW $\leq 10\mu s$ , duty cycle $\leq 1\%$	40	A
Allowable Power Dissipation	$P_D$	Mounted on a ceramic board (1000mm $^2$ X0.8mm) 1unit	1.3	W
Total Dissipation	$P_T$	Mounted on a ceramic board (1000mm $^2$ X0.8mm)	1.4	W
Channel Temperature	$T_{ch}$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA$ , $V_{GS}=0$	20			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=20V$ , $V_{GS}=0$			1	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8V$ , $V_{DS}=0$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V$ , $I_D=1mA$	0.5		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V$ , $I_D=6A$	9	13		S

Marking : D2017A

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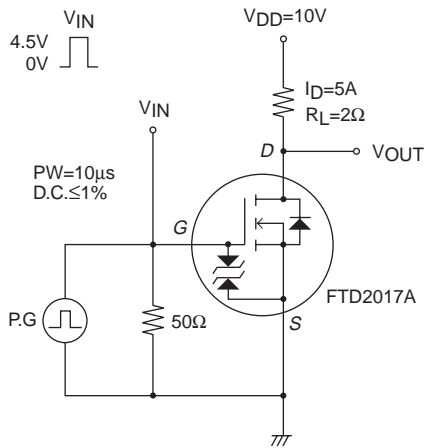
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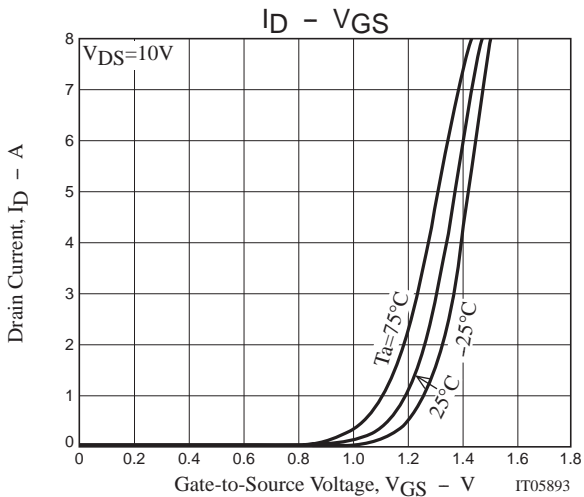
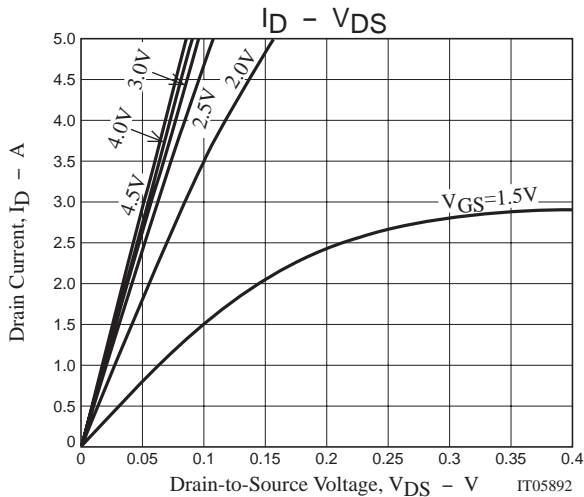
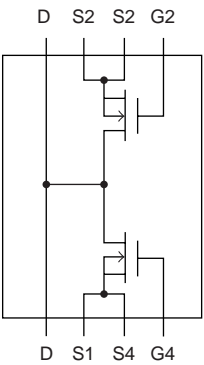
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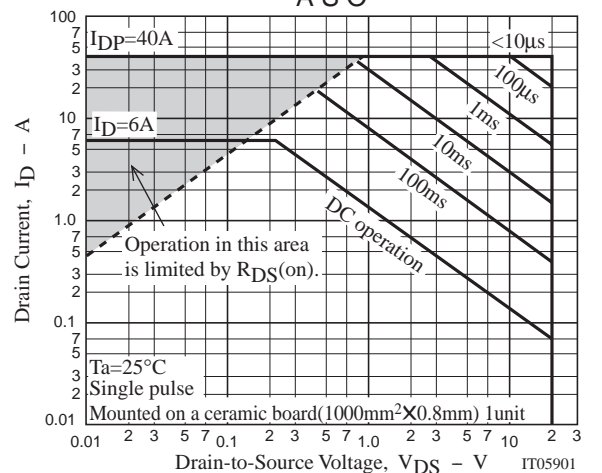
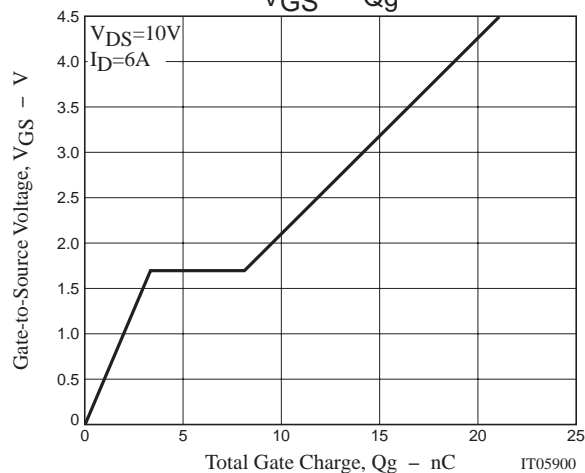
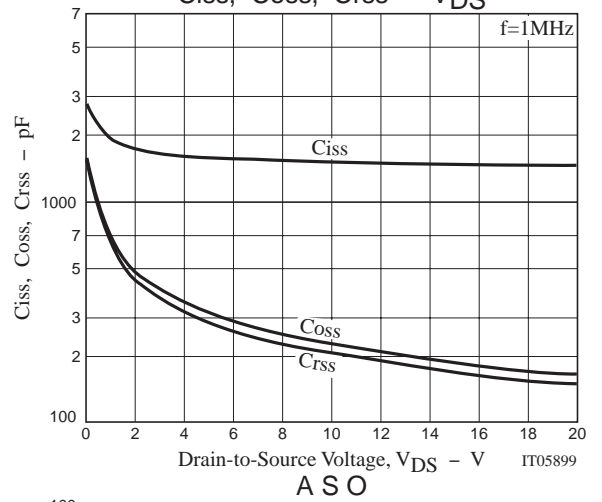
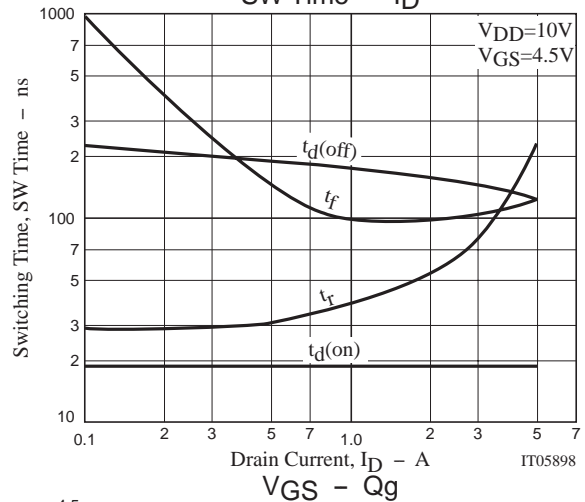
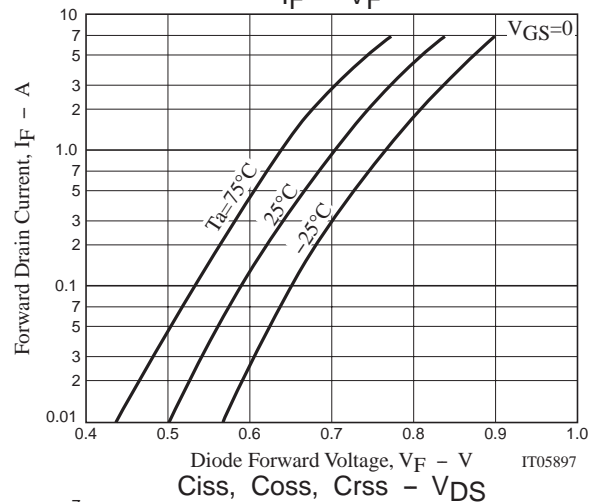
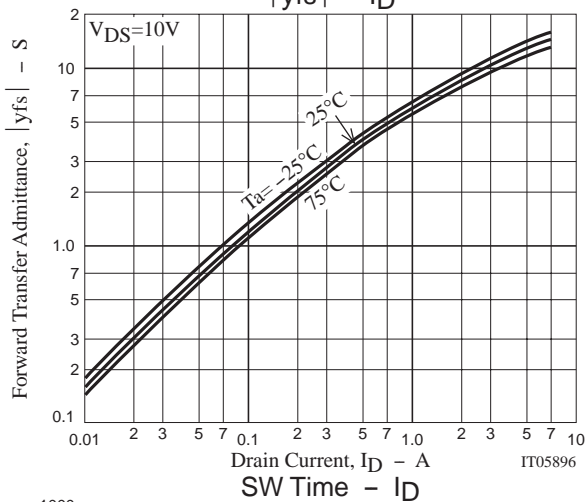
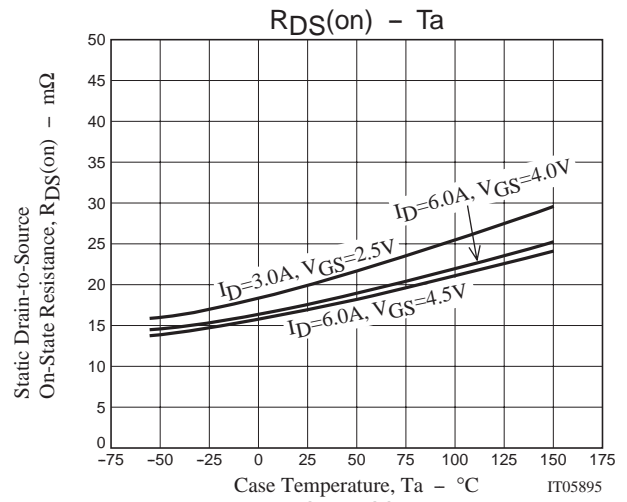
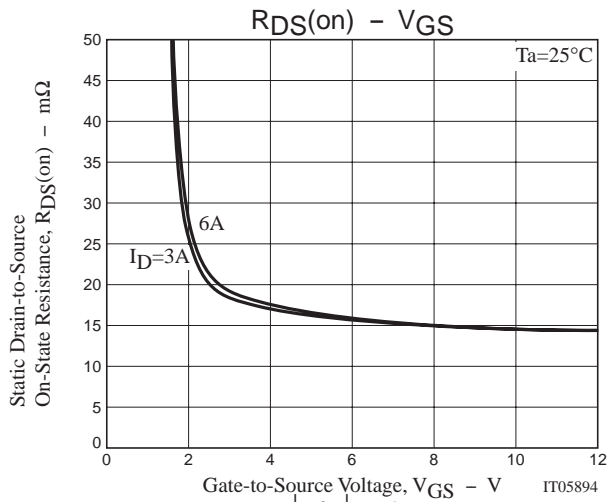
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=6A, V_{GS}=4.5V$		17	23	$m\Omega$
	$R_{DS(on)2}$	$I_D=6A, V_{GS}=4V$		18	24	$m\Omega$
	$R_{DS(on)3}$	$I_D=3A, V_{GS}=3.1V$		19	30	$m\Omega$
	$R_{DS(on)4}$	$I_D=3A, V_{GS}=2.5V$		20	33	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=10V, f=1MHz$		1530		$pF$
Output Capacitance	$C_{oss}$	$V_{DS}=10V, f=1MHz$		230		$pF$
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, f=1MHz$		215		$pF$
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		19		ns
Rise Time	$t_r$	See specified Test Circuit.		225		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		125		ns
Fall Time	$t_f$	See specified Test Circuit.		125		ns
Total Gate Charge	$Q_g$	$V_{DS}=10V, V_{GS}=4.5V, I_D=6A$		21		nC
Gate-to-Source Charge	$Q_{gs}$	$V_{DS}=10V, V_{GS}=4.5V, I_D=6A$		3.4		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$	$V_{DS}=10V, V_{GS}=4.5V, I_D=6A$		4.8		nC
Diode Forward Voltage	$V_{SD}$	$I_S=6A, V_{GS}=0$		0.83	1.2	V

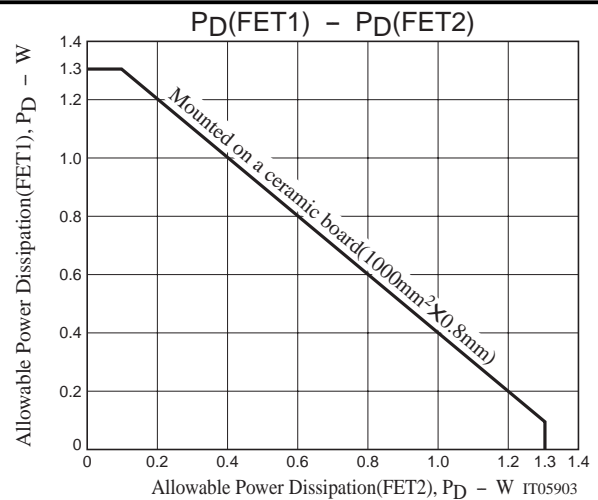
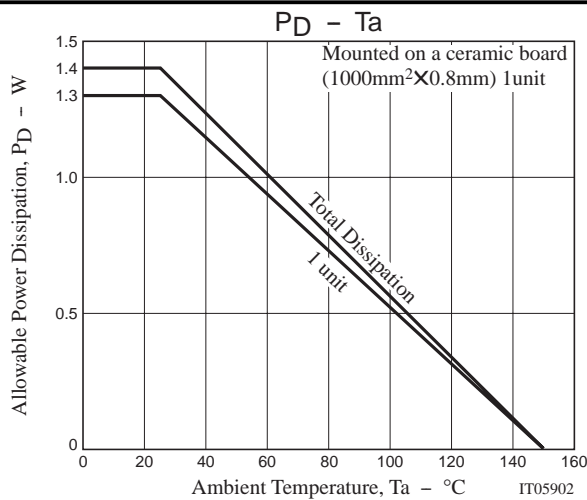
Switching Time Test Circuit



Electrical Connection (Top view)







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