



FTD2017C — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance
- Mount height 1.1mm
- Drain common specifications
- 2.5V drive
- Composite type, facilitating high-density mounting
- Halogen free compliance

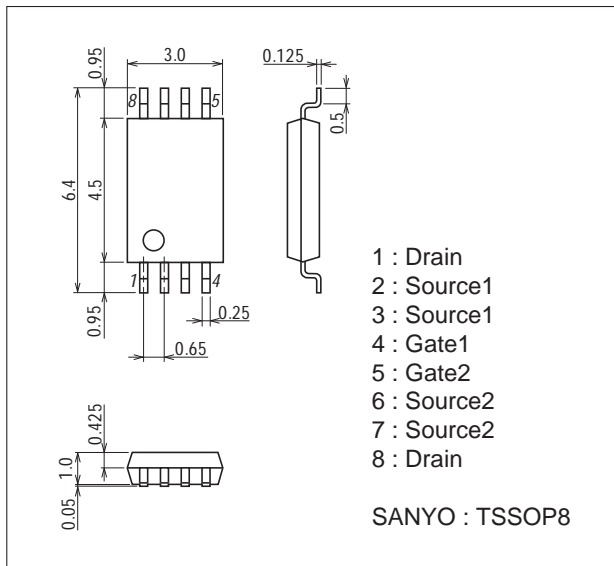
Specifications

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}		±12	V
Drain Current (DC)	I _D		6	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	40	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (1000mm ² ×0.8mm) 1unit	1.35	W
Total Dissipation	P _T	When mounted on ceramic substrate (1000mm ² ×0.8mm)	1.4	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

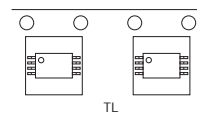
unit : mm (typ)
7006A-005



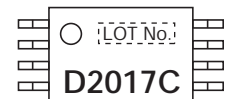
Product & Package Information

- Package : TSSOP8
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

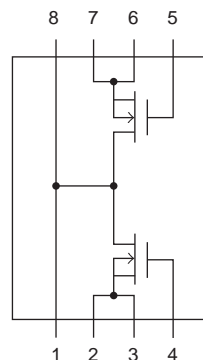
Packing Type : TL



Marking



Electrical Connection

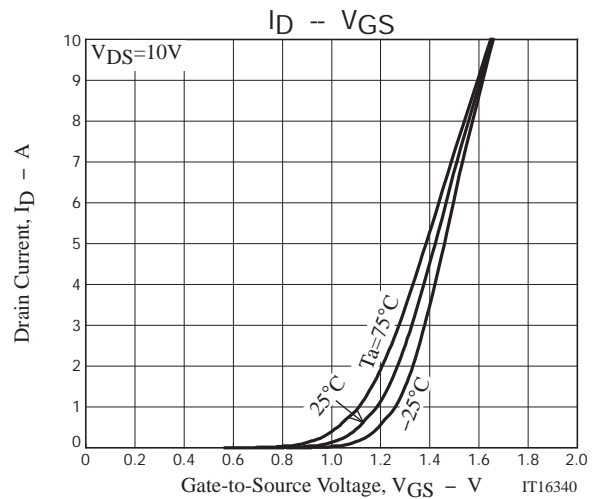
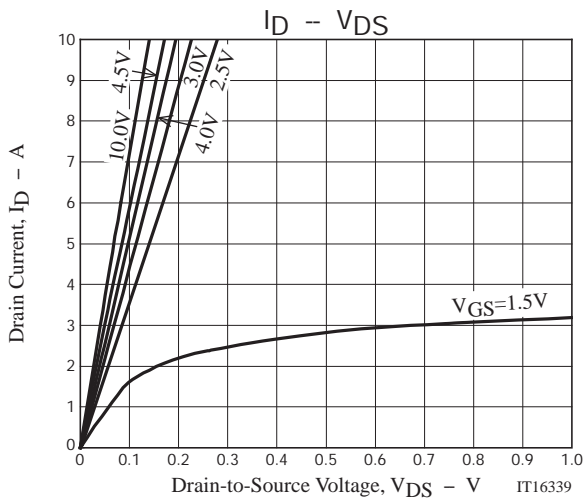
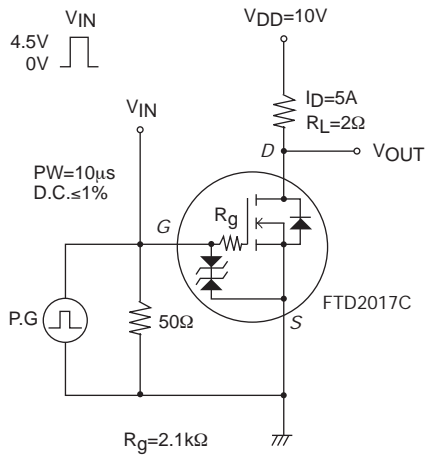


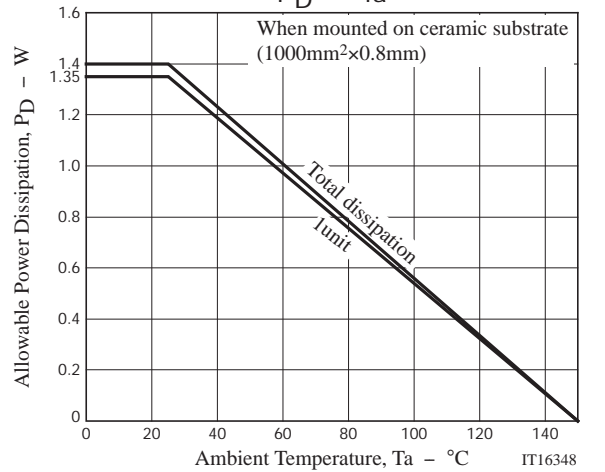
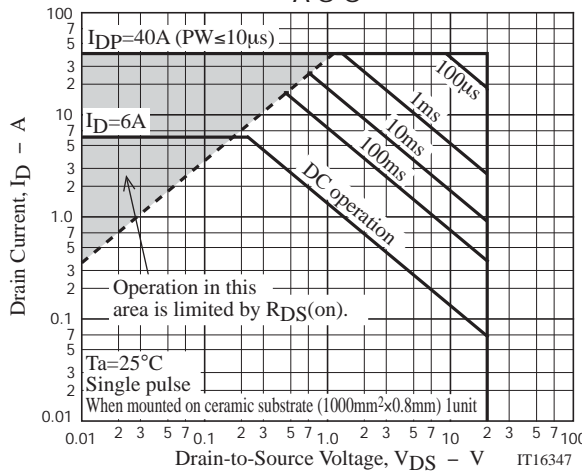
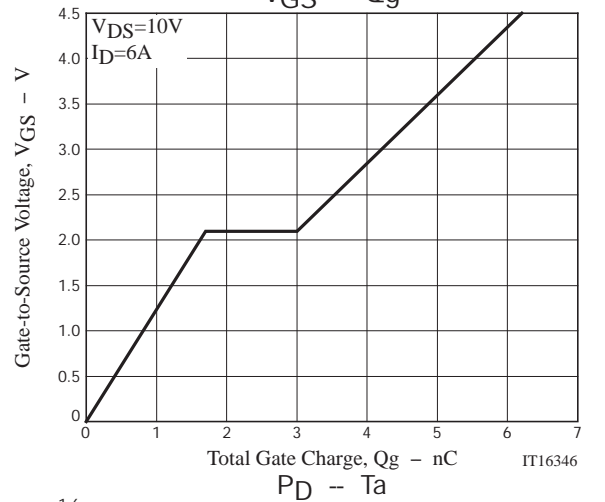
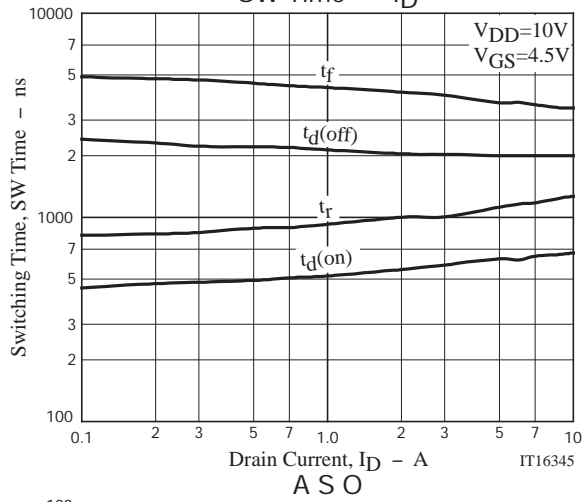
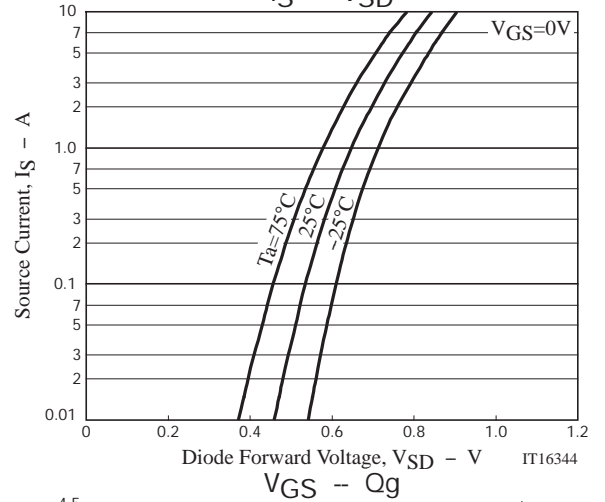
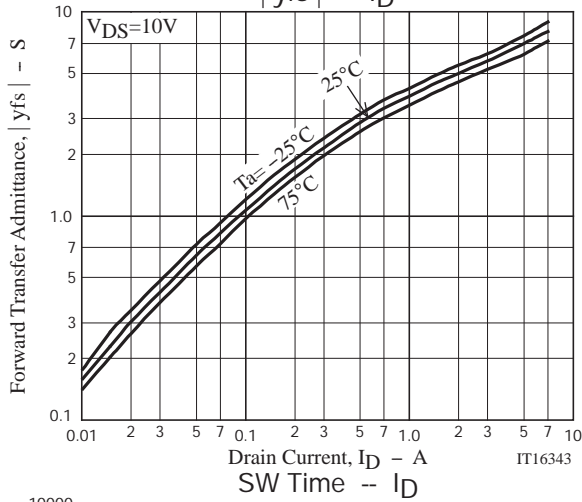
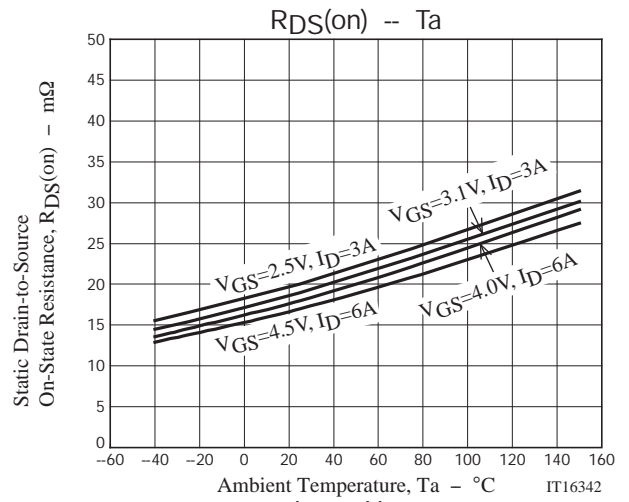
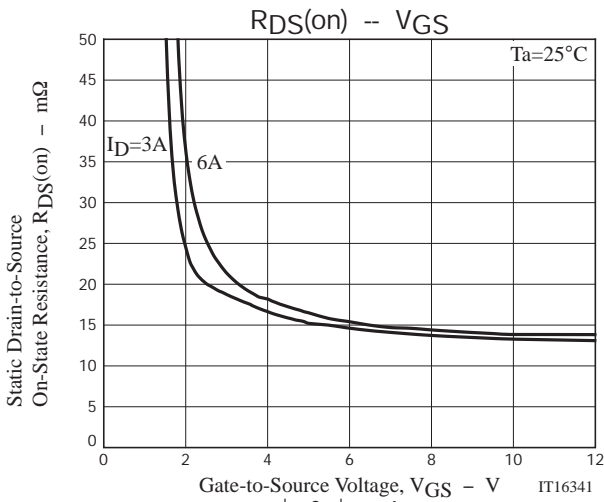
FTD2017C

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}, V_{GS}=0\text{V}$	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20\text{V}, V_{GS}=0\text{V}$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 8\text{V}, V_{DS}=0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}, I_D=1\text{mA}$	0.5		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}, I_D=6\text{A}$		7.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=6\text{A}, V_{GS}=4.5\text{V}$	13	17	23	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D=6\text{A}, V_{GS}=4\text{V}$	14	18	24	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D=3\text{A}, V_{GS}=3.1\text{V}$	15	19	30	$\text{m}\Omega$
	$R_{DS(on)4}$	$I_D=3\text{A}, V_{GS}=2.5\text{V}$	15.4	20	33	$\text{m}\Omega$
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		620		ns
Rise Time	t_r	See specified Test Circuit.		1160		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		3660		ns
Fall Time	t_f	See specified Test Circuit.		2010		ns
Total Gate Charge	Q_g	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=6\text{A}$		6.2		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=6\text{A}$		1.7		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=6\text{A}$		1.3		nC
Diode Forward Voltage	V_{SD}	$I_S=6\text{A}, V_{GS}=0\text{V}$		0.79	1.2	V

Switching Time Test Circuit





Note on usage : Since the FTD2017C is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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