

Ordering number : ENN7921



SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET
FTD8007 — General-Purpose Switching Device
 Applications

Features

- Ultralow ON-resistance.
- 2.5V drive.
- Mounting height 1.1mm.
- Composite type, facilitating high-density mounting.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		30	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	Mounted on a ceramic board (1000mm²×0.8mm)1unit	1.1	W
Total Dissipation	P _T	Mounted on a ceramic board (1000mm²×0.8mm)	1.5	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	30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} = ±8V, V _{DS} =0			±10	μA
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	9.6	16		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =6A, V _{GS} =4V		16	22	mΩ
	R _{DS(on)2}	I _D =3A, V _{GS} =2.5V		20	29	mΩ
Input Capacitance	C _{iss}	V _{DS} =10V, f=1MHz		1800		pF
Output Capacitance	C _{oss}	V _{DS} =10V, f=1MHz		255		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =10V, f=1MHz		200		pF

Marking : D8007

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FTD8007

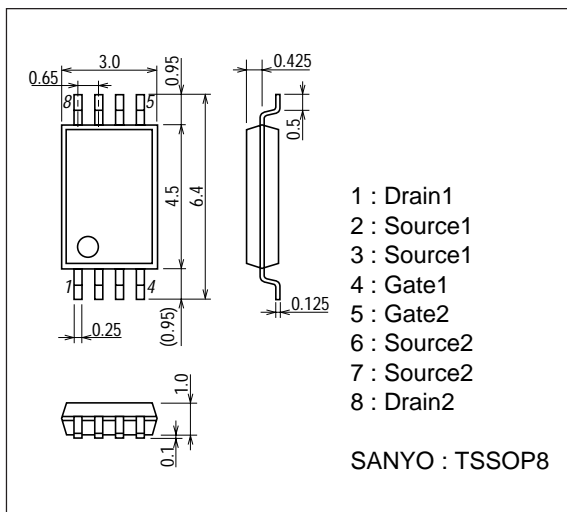
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Delay Time	$t_d(\text{on})$	See specified Test Circuit.		43		ns
Rise Time	t_r	See specified Test Circuit.		190		ns
Turn-OFF Delay Time	$t_d(\text{off})$	See specified Test Circuit.		210		ns
Fall Time	t_f	See specified Test Circuit.		170		ns
Total Gate Charge	Qg	$V_{DS}=10V, V_{GS}=4V, I_D=6A$		26.5		nC
Gate-to-Source Charge	Qgs	$V_{DS}=10V, V_{GS}=4V, I_D=6A$		3.9		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=10V, V_{GS}=4V, I_D=6A$		6.5		nC
Diode Forward Voltage	V_{SD}	$I_S=6A, V_{GS}=0$		0.81	1.2	V

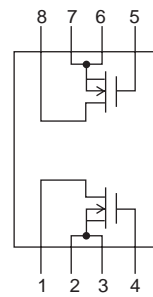
Package Dimensions

unit : mm

2155A

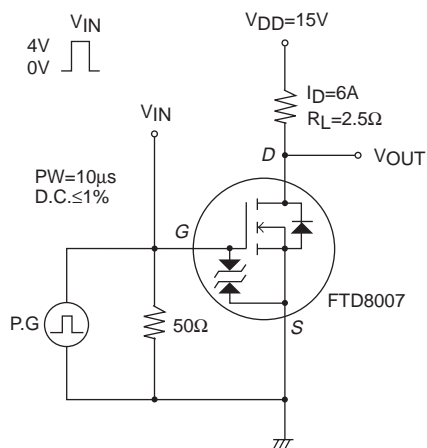


Electrical Connection

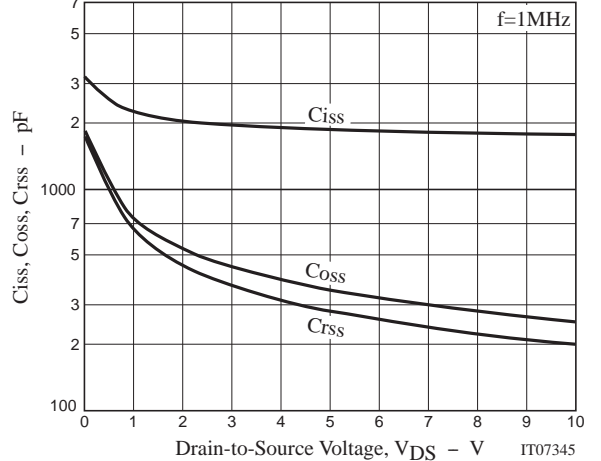
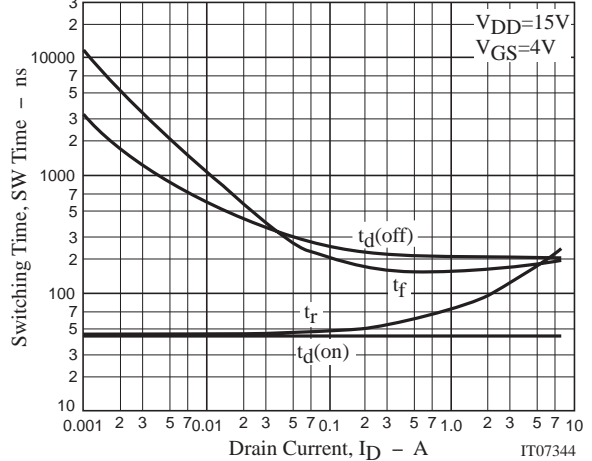
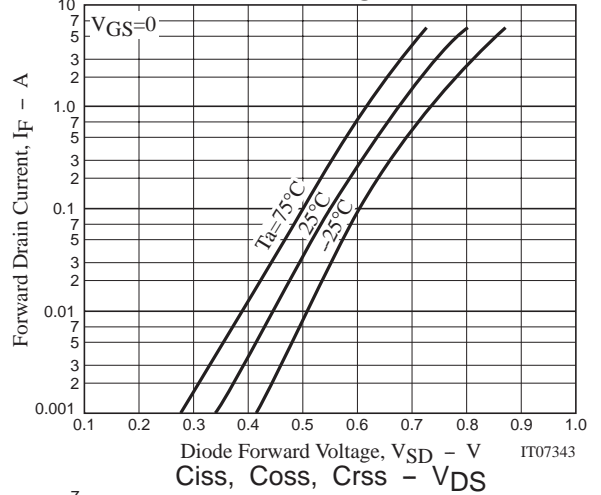
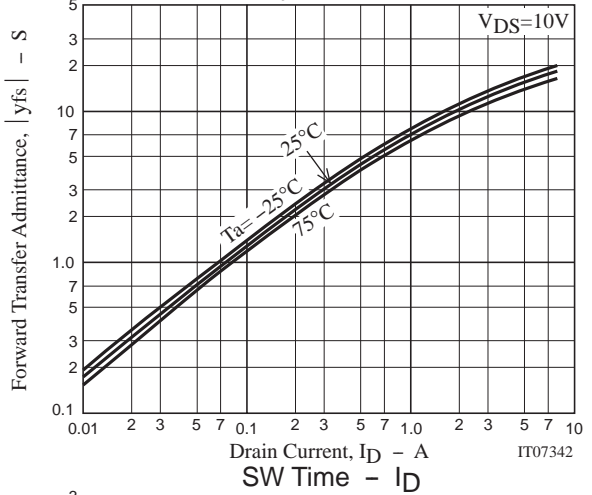
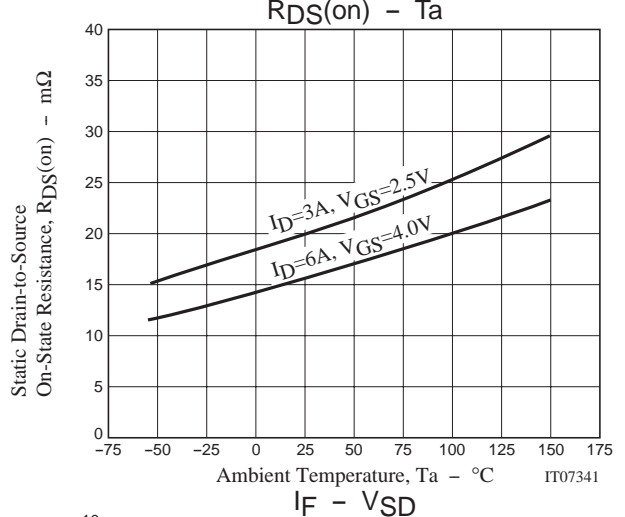
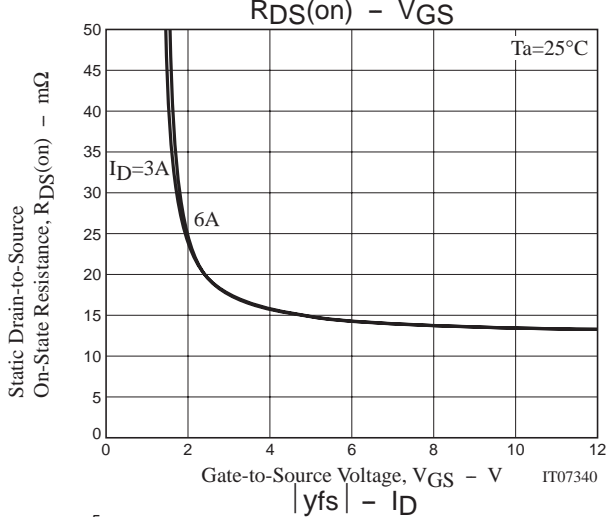
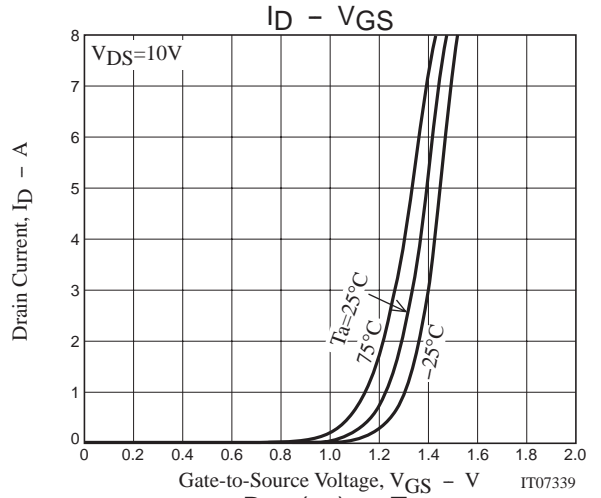
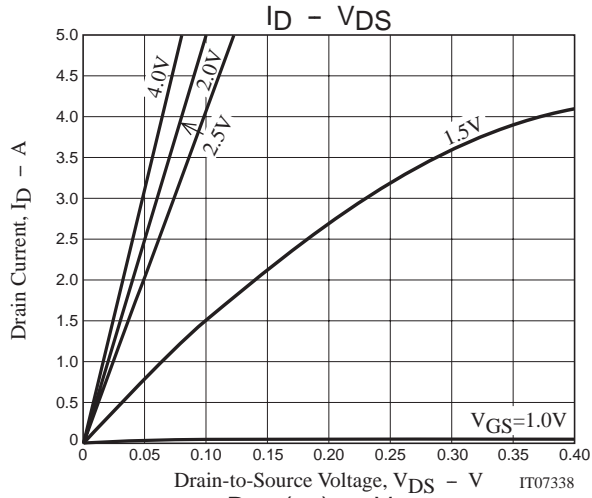


- 1 : Drain1
- 2 : Source1
- 3 : Source1
- 4 : Gate1
- 5 : Gate2
- 6 : Source2
- 7 : Source2
- 8 : Drain2

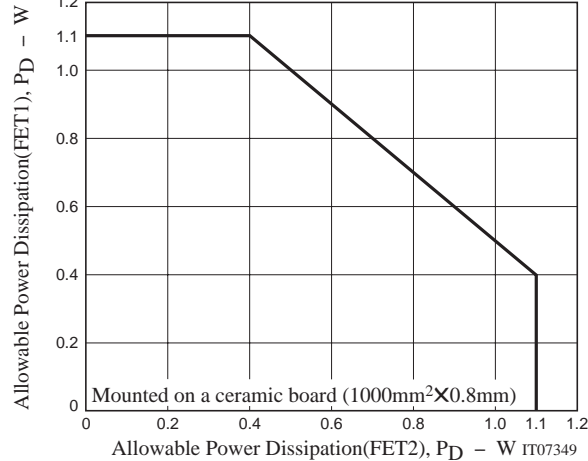
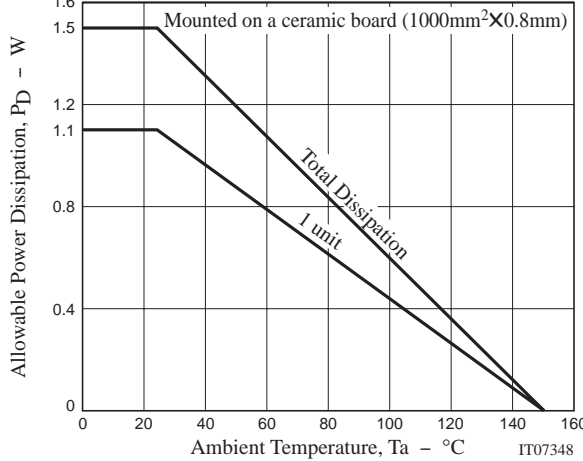
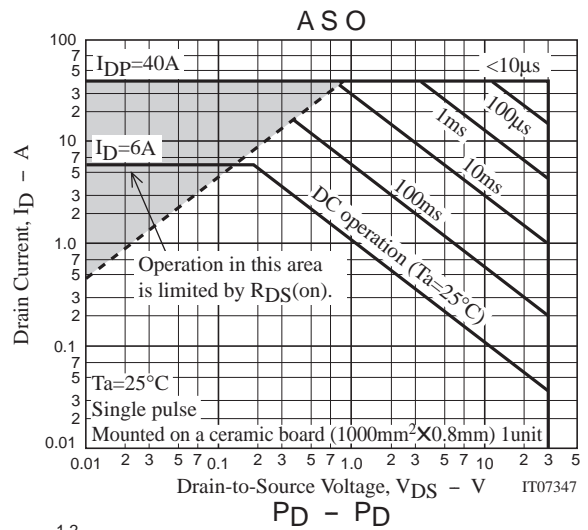
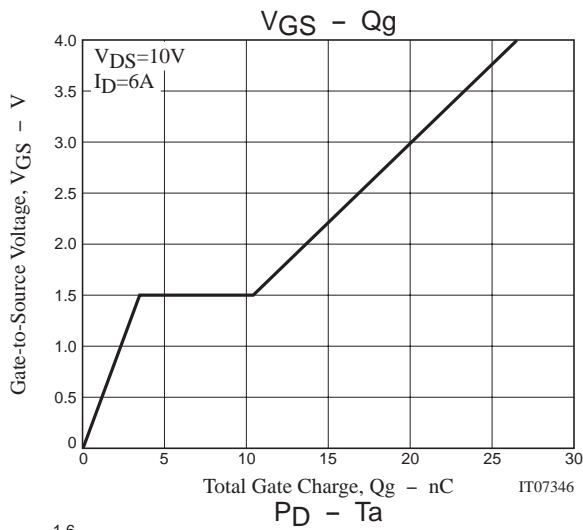
Switching Time Test Circuit



FTD8007



FTD8007



Note on usage : Since the FTD8007 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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