



# SFT1327 — P-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

### Features

- Low ON-resistance.
- 4V drive.

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		-80	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±20	V
Drain Current (DC)	I <sub>D</sub>		-4.5	A
Drain Current (PW≤10μs)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	-18	A
Allowable Power Dissipation	P <sub>D</sub>		1.0	W
		T <sub>c</sub> =25°C	15	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-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 <sub>D</sub> =-1mA, V <sub>GS</sub> =0V	-80			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-80V, V <sub>GS</sub> =0V			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±16V, V <sub>DS</sub> =0V			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-2.3A	3.4	5.7		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-2.3A, V <sub>GS</sub> =-10V		137	178	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-2.3A, V <sub>GS</sub> =-4.5V		162	227	mΩ
	R <sub>DS(on)3</sub>	I <sub>D</sub> =-2.3A, V <sub>GS</sub> =-4V		171	239	mΩ

Marking : T1327

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# SFT1327

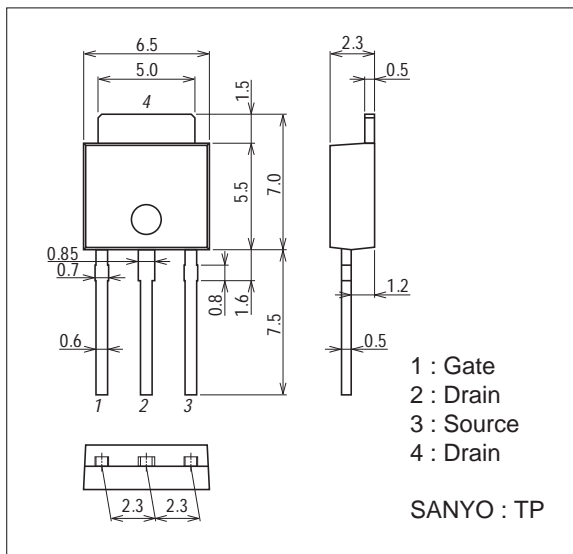
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=-20V, f=1MHz$		1110		pF
Output Capacitance	Coss	$V_{DS}=-20V, f=1MHz$		75		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-20V, f=1MHz$		55		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		12		ns
Rise Time	$t_r$	See specified Test Circuit.		89		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		112		ns
Fall Time	$t_f$	See specified Test Circuit.		45		ns
Total Gate Charge	Qg	$V_{DS}=-40V, V_{GS}=-10V, I_D=-4.5A$		19.7		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-40V, V_{GS}=-10V, I_D=-4.5A$		2.9		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=-40V, V_{GS}=-10V, I_D=-4.5A$		2.9		nC
Diode Forward Voltage	VSD	$I_S=-4.5A, V_{GS}=0V$		-0.86	-1.2	V

## Package Dimensions

unit : mm (typ)

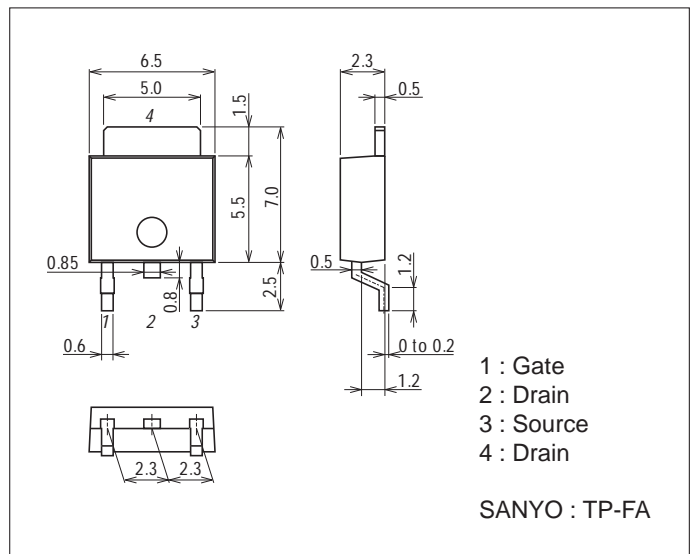
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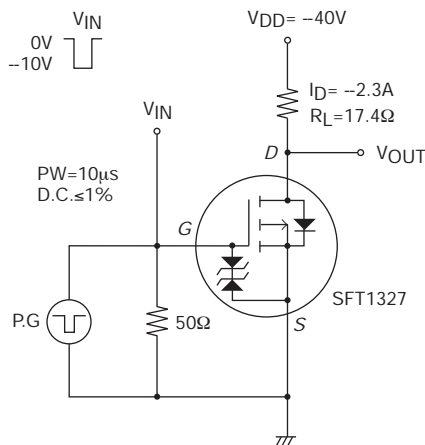
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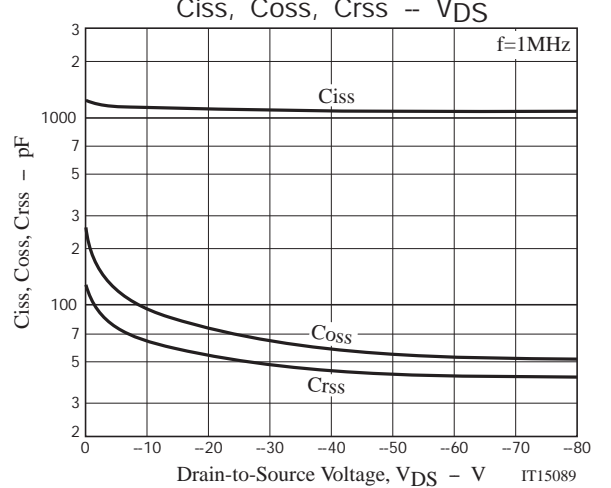
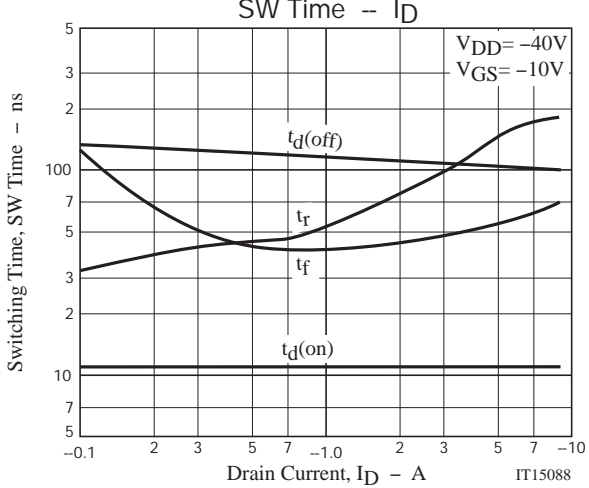
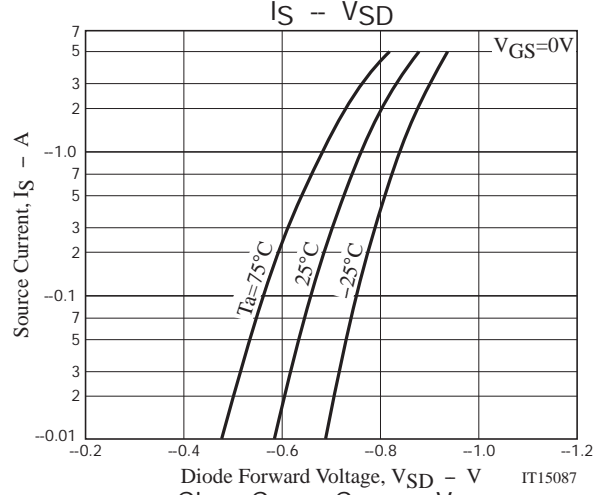
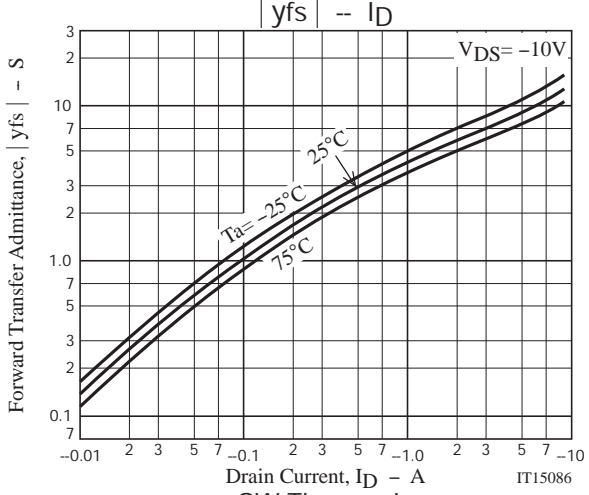
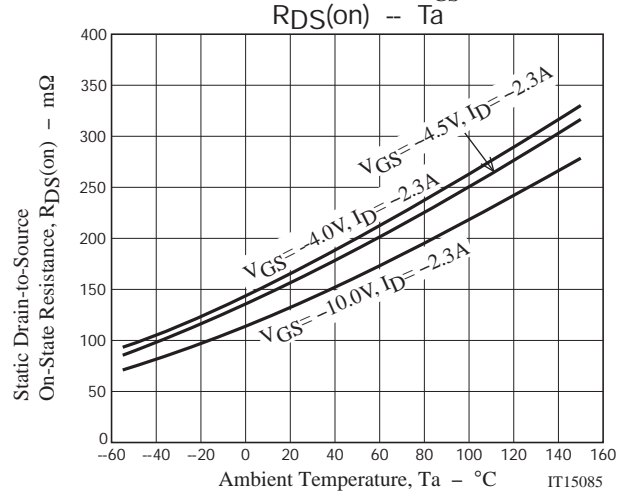
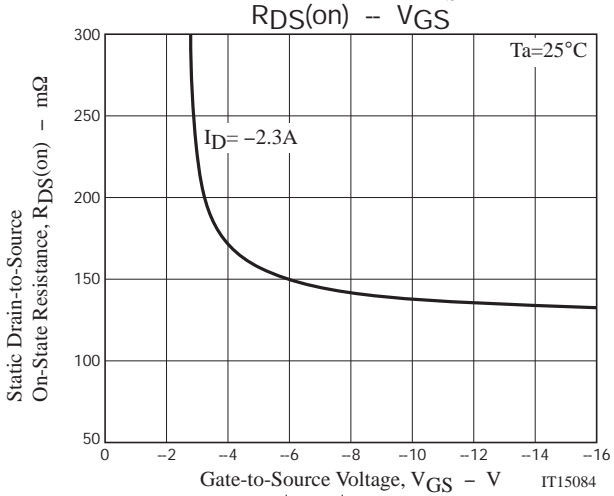
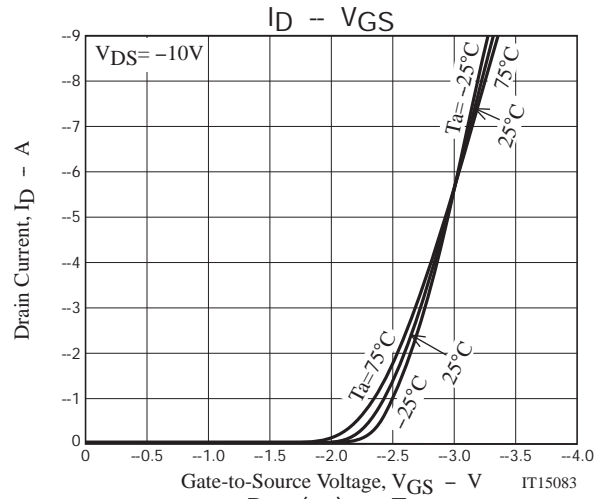
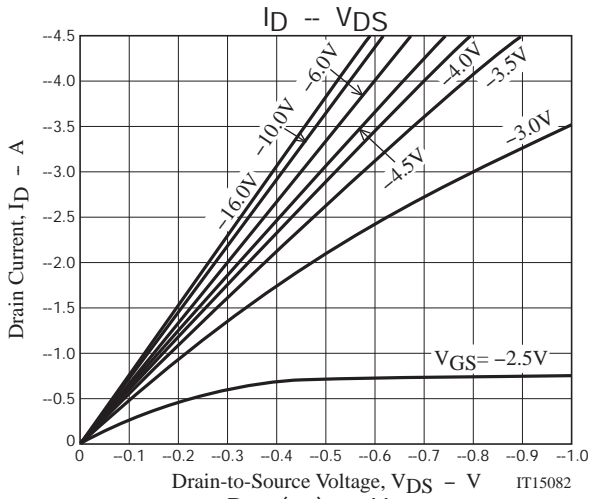
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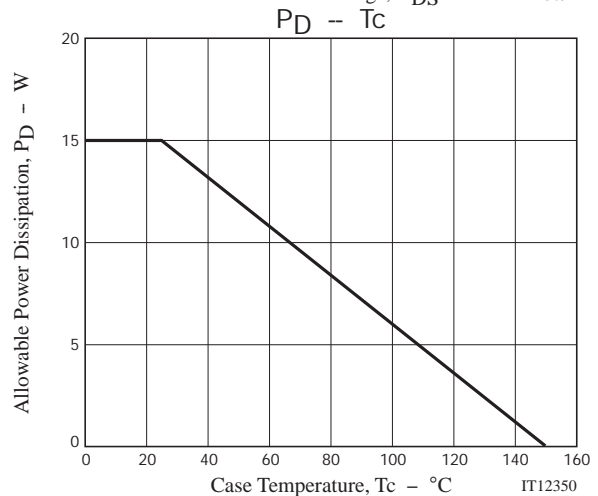
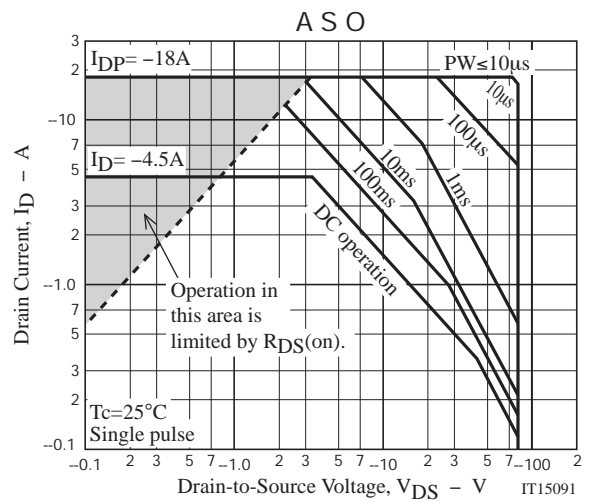
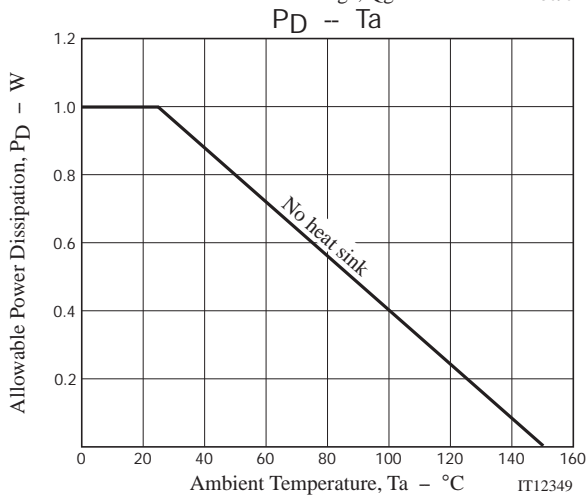
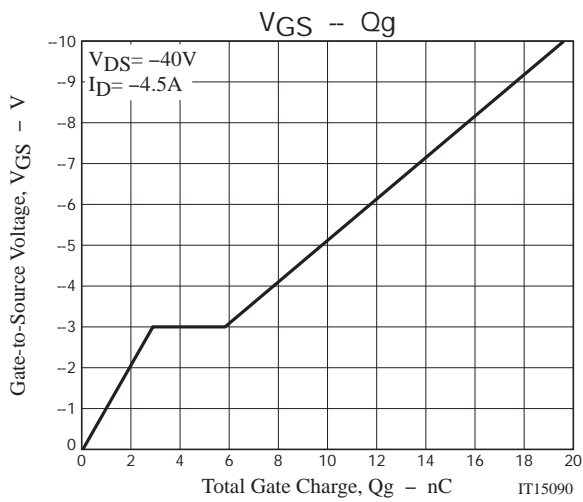
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## Switching Time Test Circuit







Note on usage : Since the SFT1327 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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