



SANYO Semiconductors

DATA SHEET

SFT1342 — P-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Motor drive application.
- 4V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-60	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		-12	A
Drain Current (PW≤10μs)	I _{DP}	PW≤10μs, duty cycle≤1%	-48	A
Allowable Power Dissipation	P _D		1.0	W
		Tc=25°C	15	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} =0V	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-6A		11		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-6A, V _{GS} =-10V		47	62	mΩ
	R _{DS(on)2}	I _D =-6A, V _{GS} =-4.5V		62	87	mΩ
	R _{DS(on)3}	I _D =-6A, V _{GS} =-4V		68	96	mΩ

Marking : T1342

Continued on next page.

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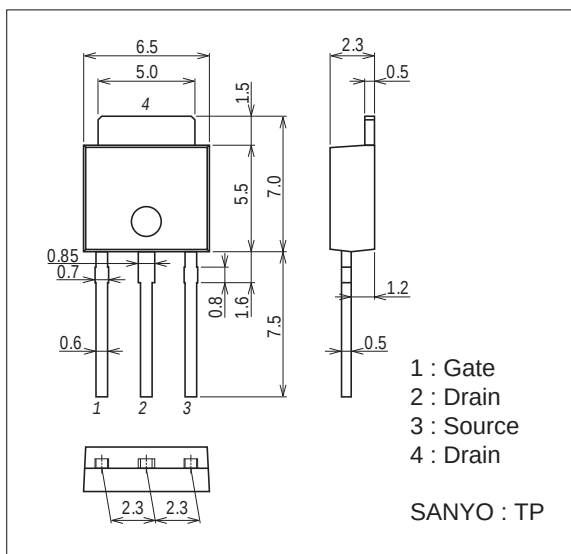
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=-20V, f=1MHz$		1150		pF
Output Capacitance	Coss	$V_{DS}=-20V, f=1MHz$		115		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=-20V, f=1MHz$		95		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		10		ns
Rise Time	t_r	See specified Test Circuit.		37		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		135		ns
Fall Time	t_f	See specified Test Circuit.		75		ns
Total Gate Charge	Qg	$V_{DS}=-30V, V_{GS}=-10V, I_D=-12A$		26		nC
Gate-to-Source Charge	Qgs	$V_{DS}=-30V, V_{GS}=-10V, I_D=-12A$		3.5		nC
Gate-to-Drain “Miller” Charge	Qgd	$V_{DS}=-30V, V_{GS}=-10V, I_D=-12A$		5		nC
Diode Forward Voltage	VSD	$I_S=-12A, V_{GS}=0V$		-0.95	-1.2	V

Package Dimensions

unit : mm (typ)

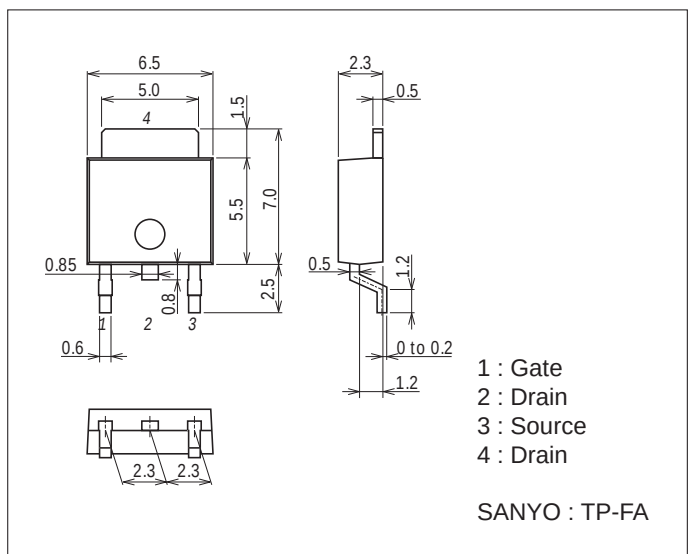
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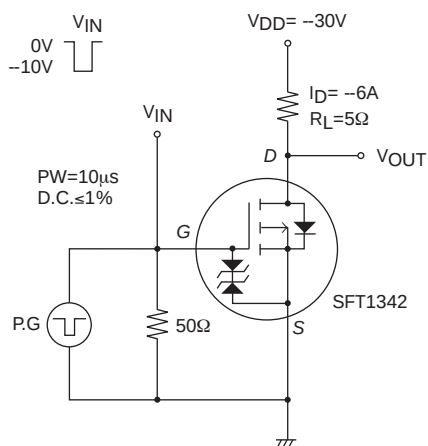
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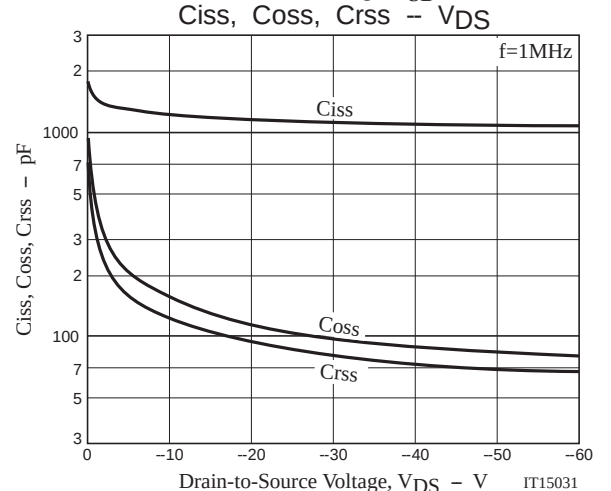
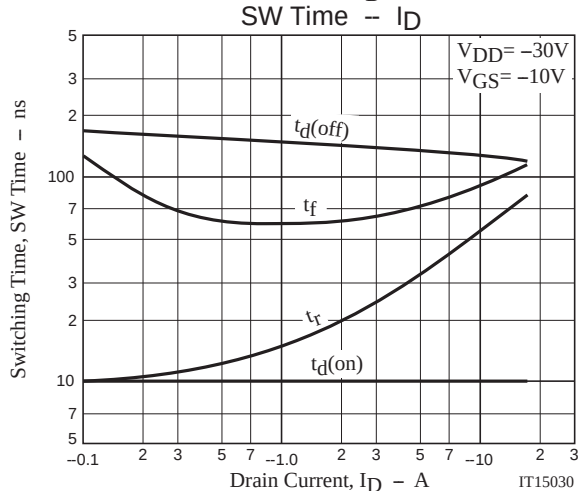
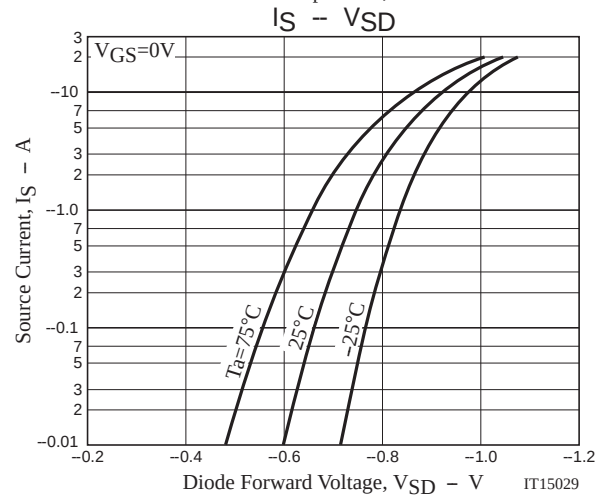
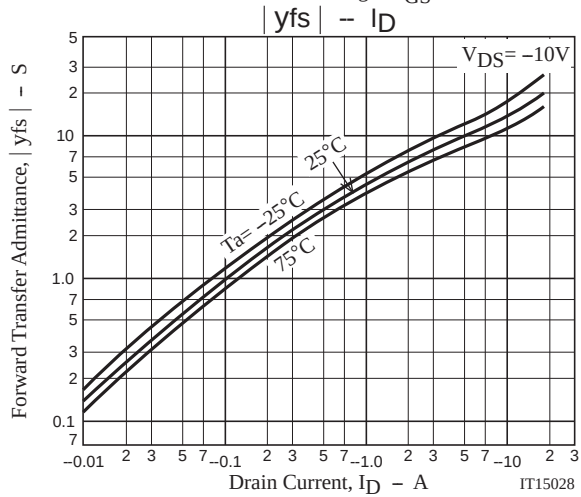
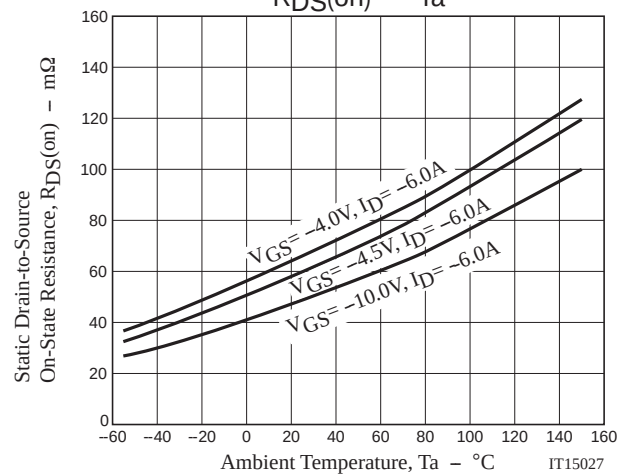
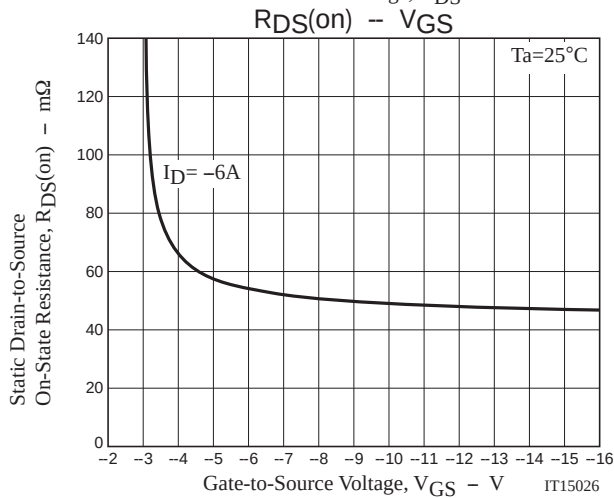
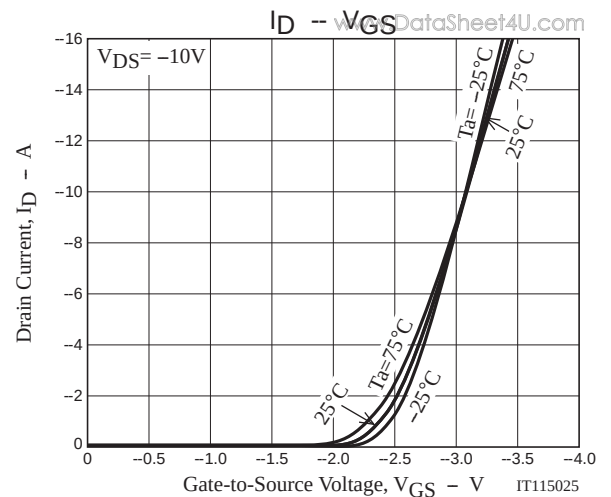
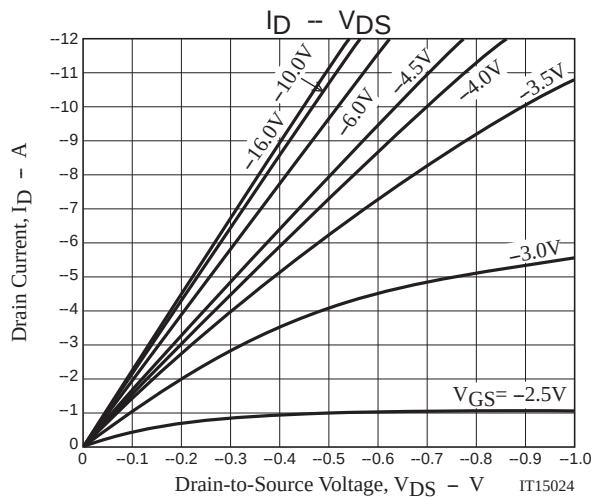
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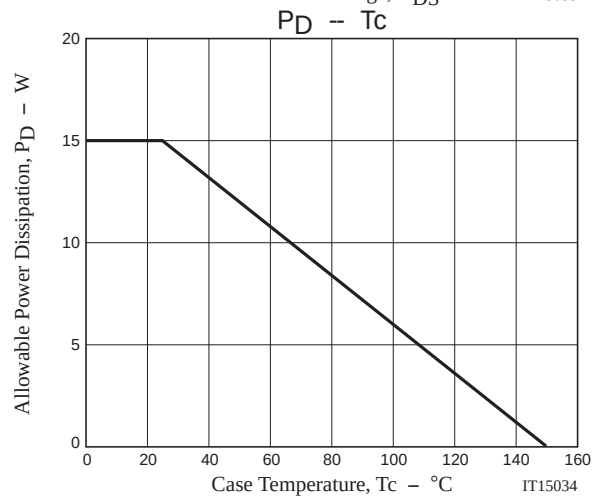
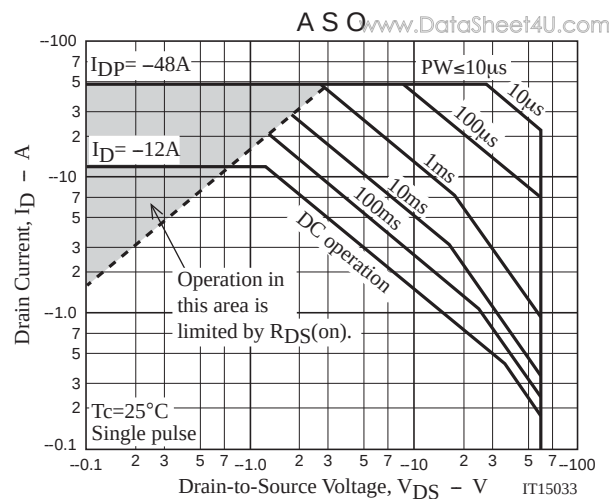
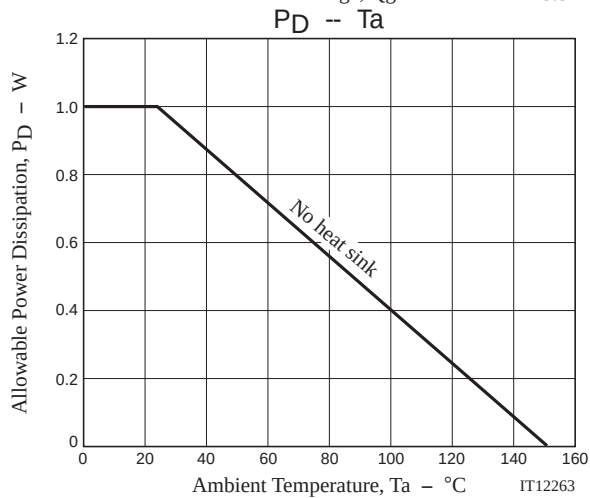
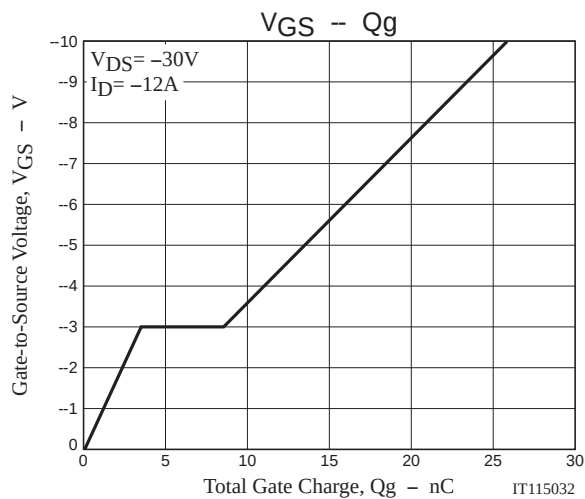
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Switching Time Test Circuit







Note on usage : Since the SFT1342 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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