



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

P-Channel Silicon MOSFET

SFT1345 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)1}=210m\Omega(\text{typ.})$
- 4V drive
- Input Capacitance $C_{iss}=1020pF(\text{typ.})$
- Halogen free compliance

Specifications

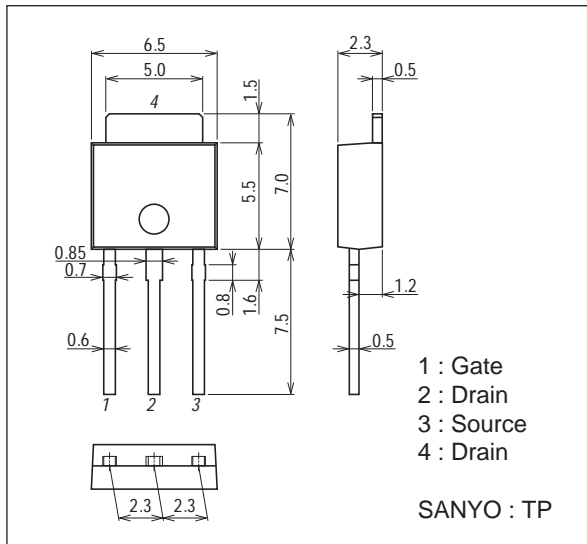
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-100	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-11	A
Drain Current ($PW \leq 10\mu s$)	I_{DP}	$PW \leq 10\mu s, \text{ duty cycles} \leq 1\%$	-44	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c=25^\circ\text{C}$	35	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Package Dimensions

unit : mm (typ)

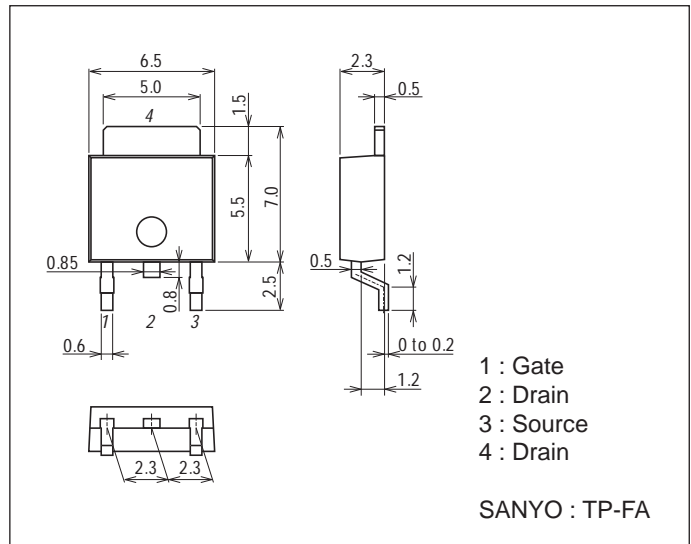
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Package Dimensions

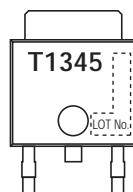
unit : mm (typ)

7003-004



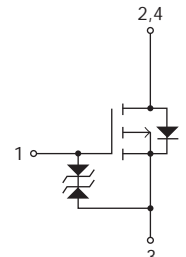
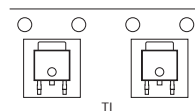
Product & Package Information

- Package : TP
 - JEITA, JEDEC : SC-64, TO-251, SOT-553
 - Minimum Packing Quantity : 500 pcs./bag
- Marking(TP, TP-FA)



Product & Package Information Electrical Connection

- Package : TP-FA
 - JEITA, JEDEC : SC-63, TO-252, SOT-428
 - Minimum Packing Quantity : 700 pcs./reel
- Packing Type(TP-FA) : TL



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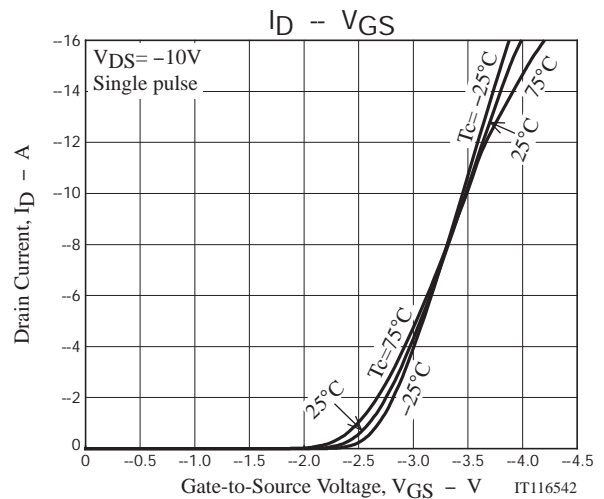
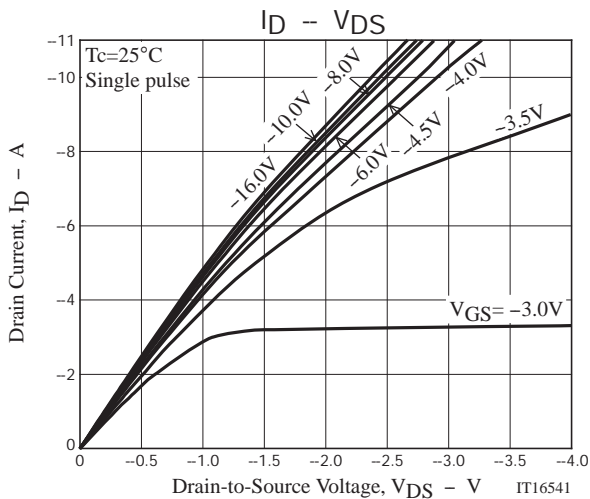
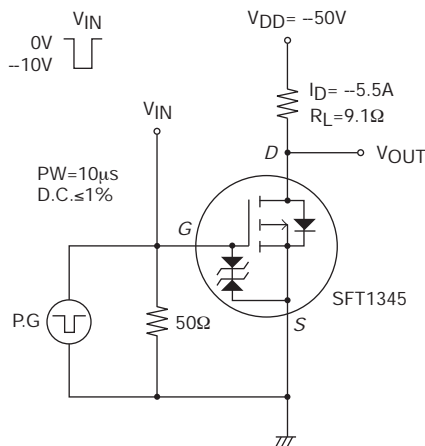
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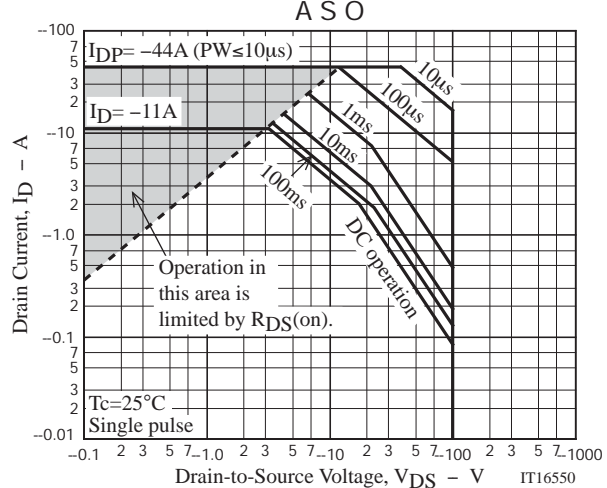
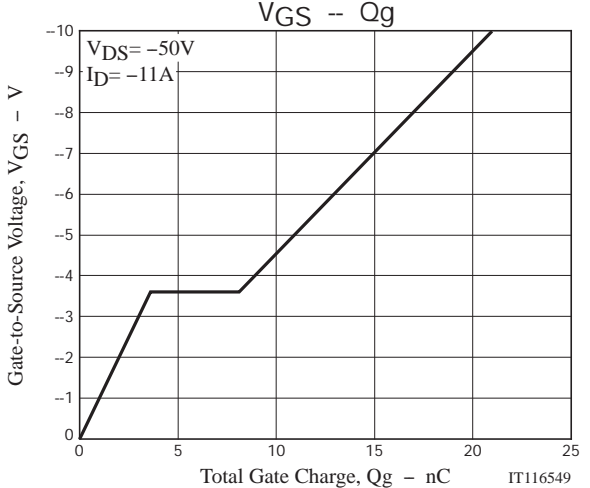
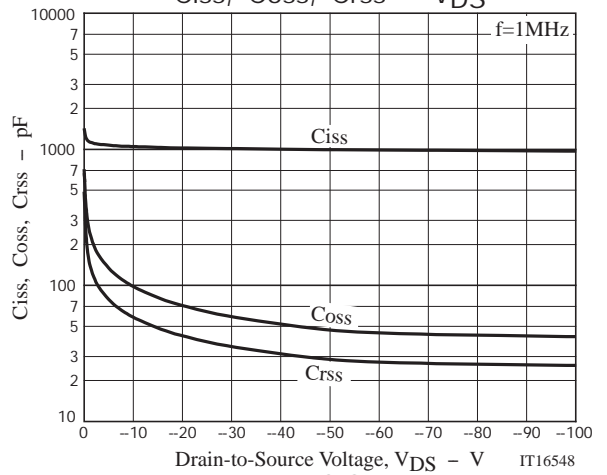
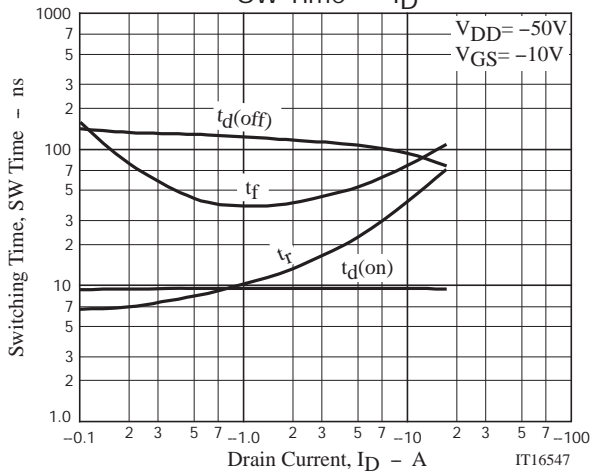
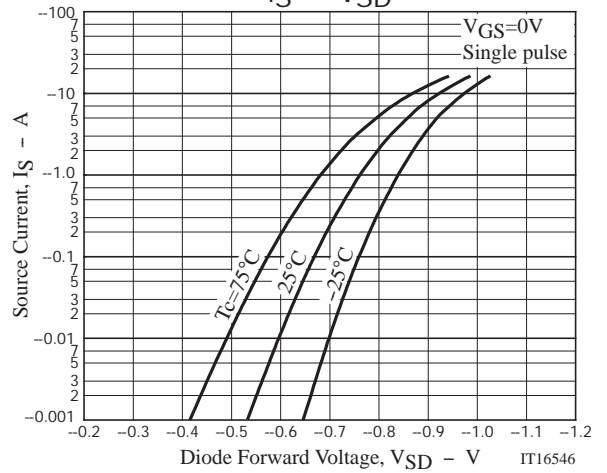
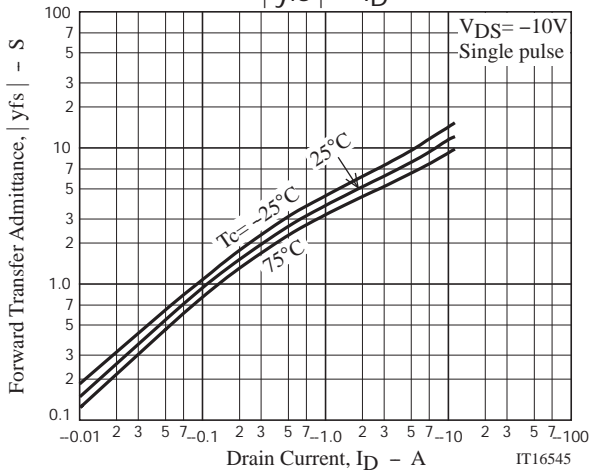
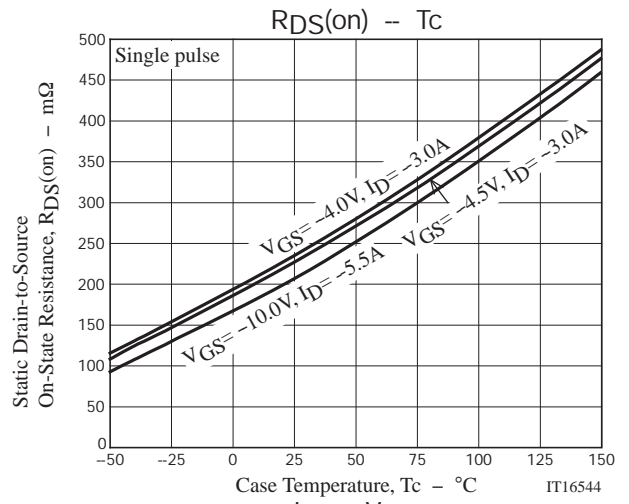
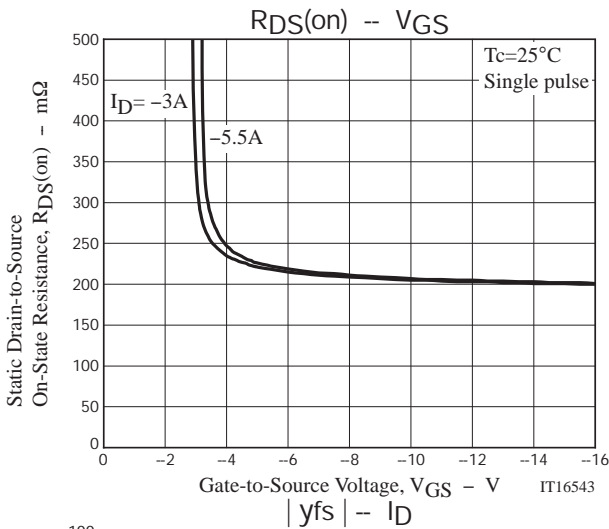
SFT1345

Electrical Characteristics at Ta=25°C

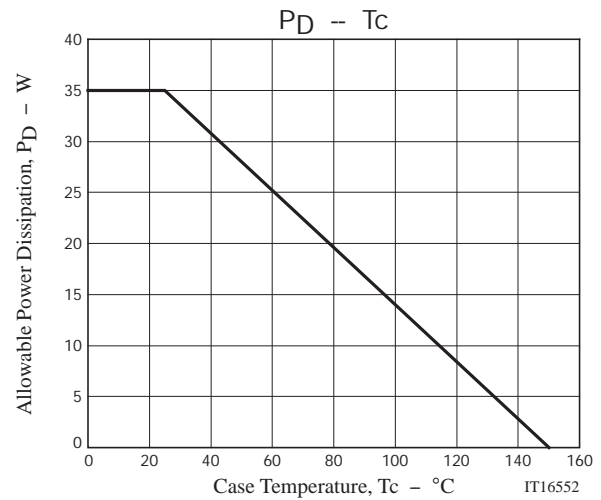
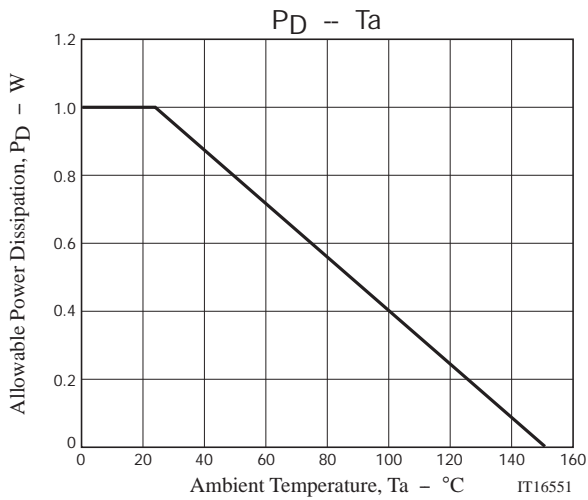
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0\text{V}$	-100			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -100\text{V}, V_{GS} = 0\text{V}$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}, V_{DS} = 0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.2		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}, I_D = -5.5\text{A}$		8.5		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -5.5\text{A}, V_{GS} = -10\text{V}$		210	275	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = -3\text{A}, V_{GS} = -4.5\text{V}$		225	315	$\text{m}\Omega$
	$R_{DS(on)3}$	$I_D = -3\text{A}, V_{GS} = -4\text{V}$		235	330	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		1020		pF
Output Capacitance	C_{oss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		72		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		43		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		9.5		ns
Rise Time	t_r	See specified Test Circuit.		25		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		105		ns
Fall Time	t_f	See specified Test Circuit.		55		ns
Total Gate Charge	Q_g	$V_{DS} = -50\text{V}, V_{GS} = -10\text{V}, I_D = -11\text{A}$		21		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -50\text{V}, V_{GS} = -10\text{V}, I_D = -11\text{A}$		3.6		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS} = -50\text{V}, V_{GS} = -10\text{V}, I_D = -11\text{A}$		4.5		nC
Diode Forward Voltage	V_{SD}	$I_S = -11\text{A}, V_{GS} = 0\text{V}$		-0.93	-1.5	V

Switching Time Test Circuit





SFT1345



Note on usage : Since the SFT1345 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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