



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SFT1443 — N-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)} = 180\text{m}\Omega(\text{typ.})$
- 4V drive
- Input Capacitance $C_{iss} = 490\text{pF}(\text{typ.})$
- Halogen free compliance

Specifications

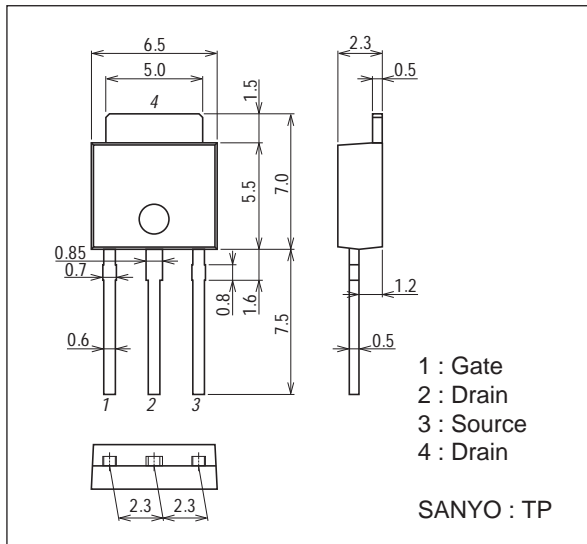
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

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		9	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	36	A
Allowable Power Dissipation	P_D		1	W
		$T_c = 25^\circ\text{C}$	19	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Package Dimensions

unit : mm (typ)

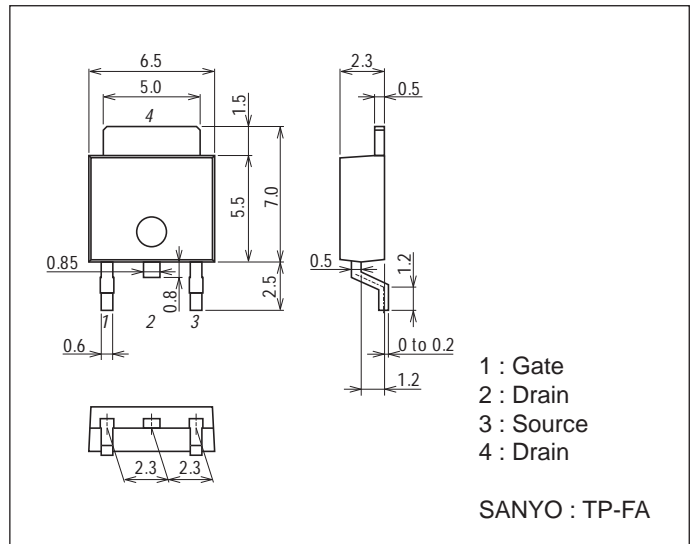
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Package Dimensions

unit : mm (typ)

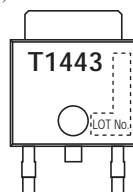
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Product & Package Information

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

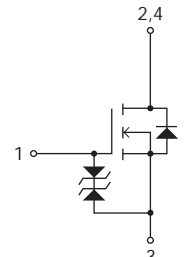
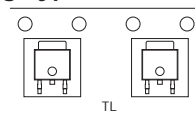
Marking(TP, TP-FA)



Product & Package Information Electrical Connection

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

Packing Type(TP-FA) : TL



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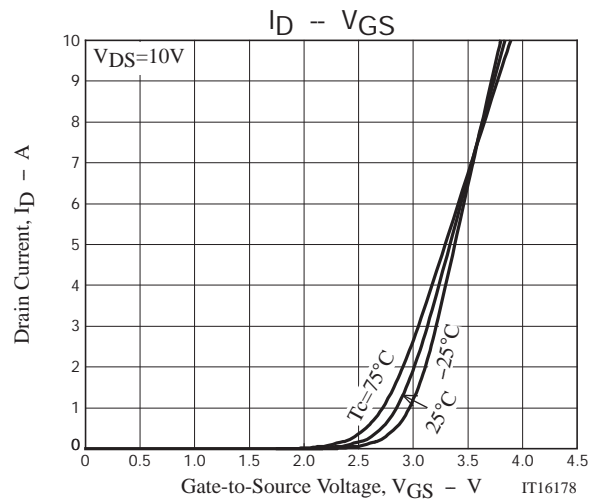
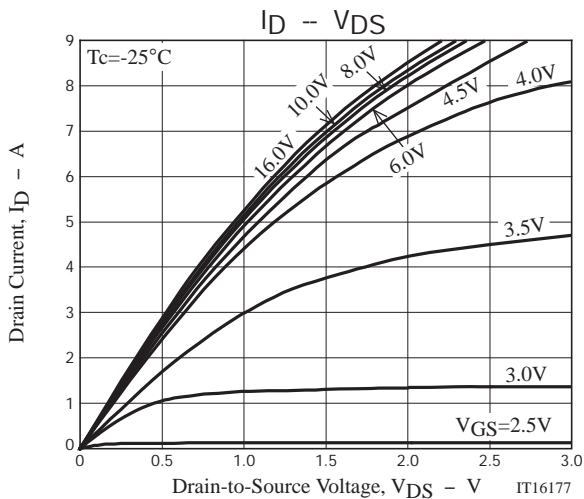
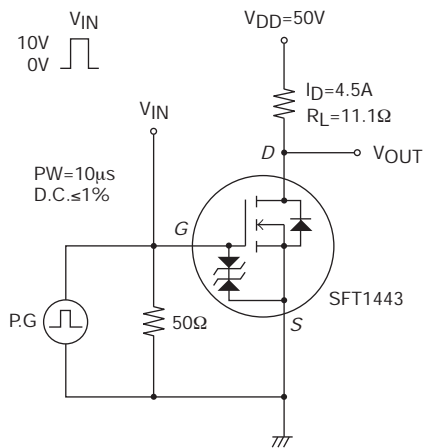
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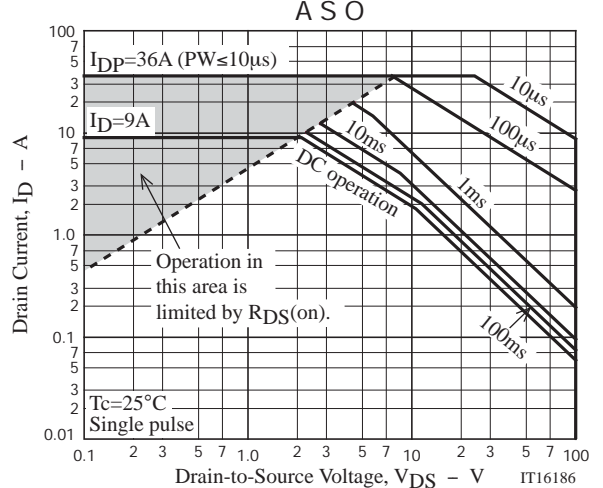
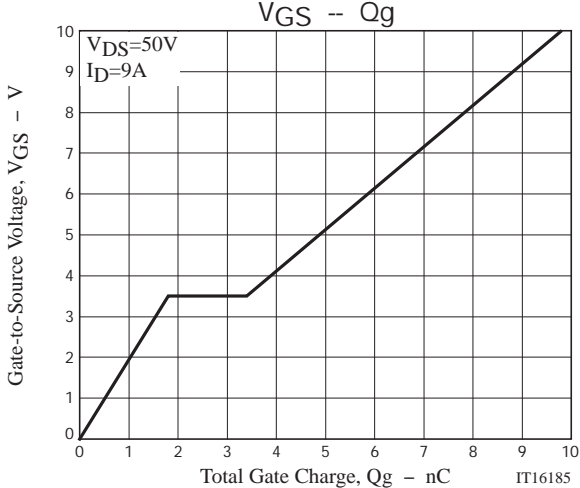
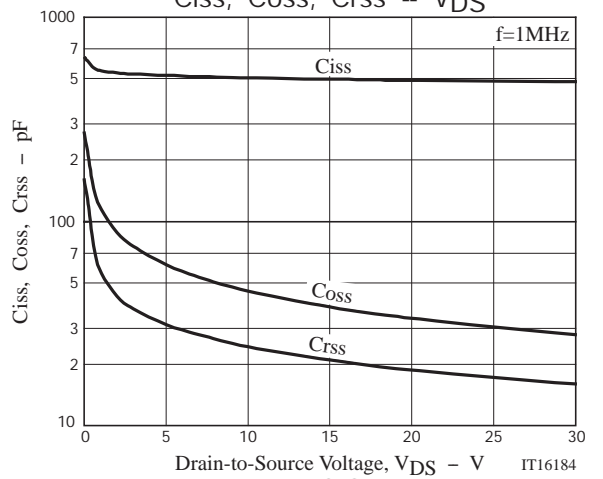
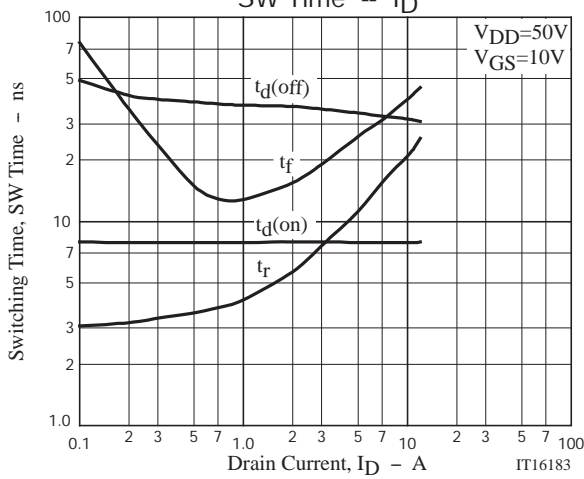
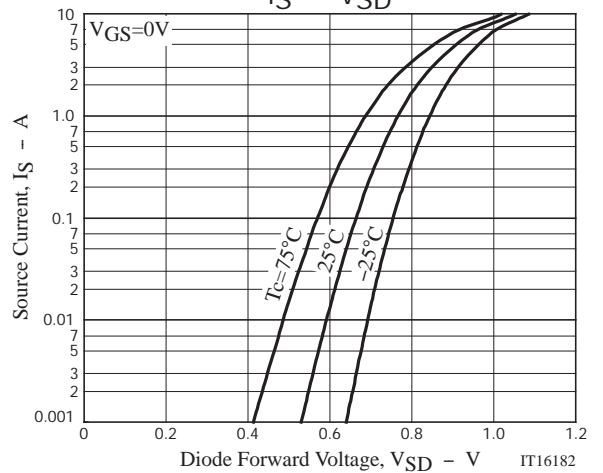
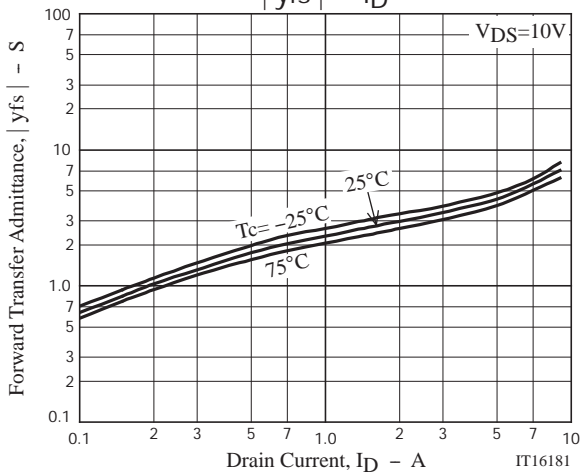
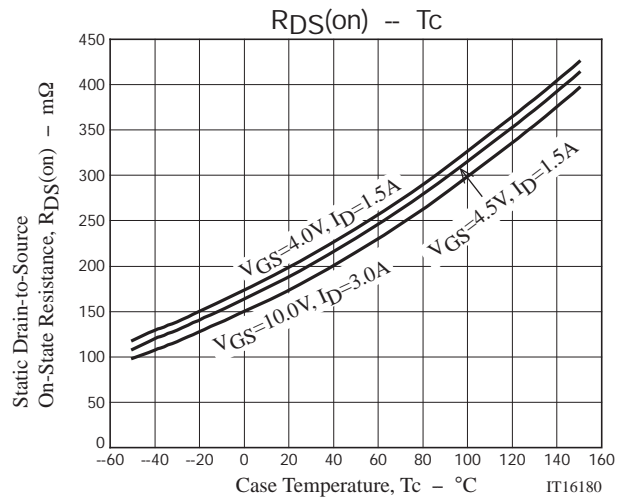
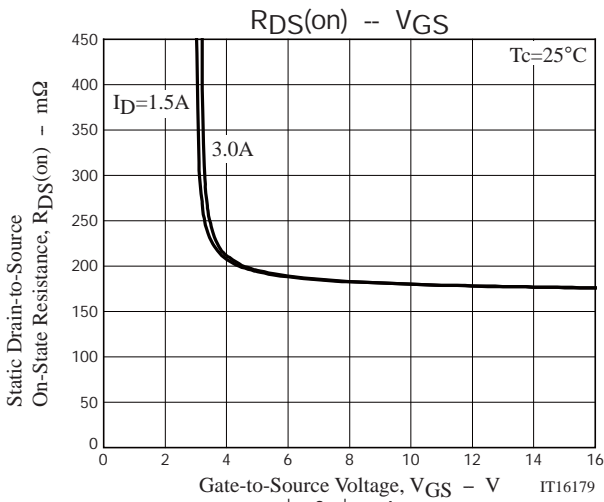
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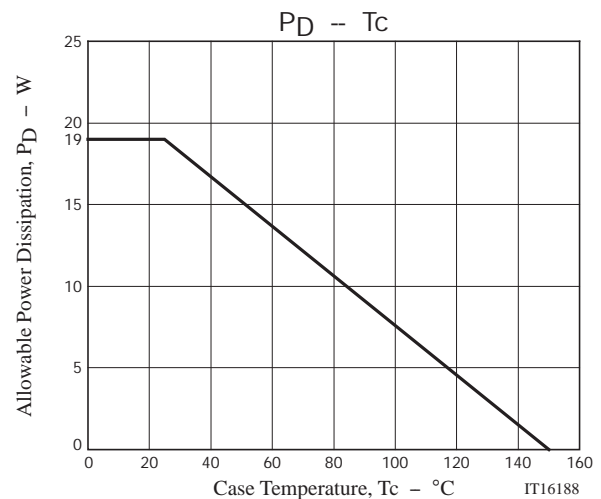
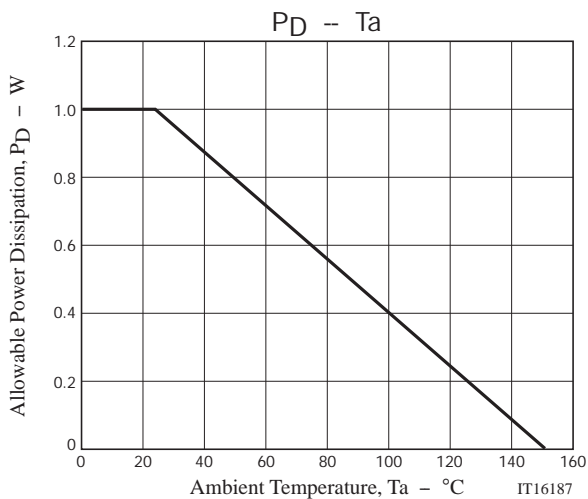
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1mA, V_{GS}=0V$	100			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0V$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	1.5		2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=4.5A$		4		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=3A, V_{GS}=10V$		180	225	$m\Omega$
	$R_{DS(on)2}$	$I_D=1.5A, V_{GS}=4.5V$		195	275	$m\Omega$
	$R_{DS(on)3}$	$I_D=1.5A, V_{GS}=4V$		205	290	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=20V, f=1MHz$		490		pF
Output Capacitance	C_{oss}	$V_{DS}=20V, f=1MHz$		34		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=20V, f=1MHz$		19		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		8		ns
Rise Time	t_r	See specified Test Circuit.		10		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		34		ns
Fall Time	t_f	See specified Test Circuit.		24		ns
Total Gate Charge	Q_g	$V_{DS}=50V, V_{GS}=10V, I_D=9A$		9.8		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=50V, V_{GS}=10V, I_D=9A$		1.8		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=50V, V_{GS}=10V, I_D=9A$		1.6		nC
Diode Forward Voltage	V_{SD}	$I_S=9A, V_{GS}=0V$		1.03	1.2	V

Switching Time Test Circuit







Note on usage : Since the SFT1443 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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