



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET

SFT1440 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)}=6.2\Omega(\text{typ.})$

Specifications

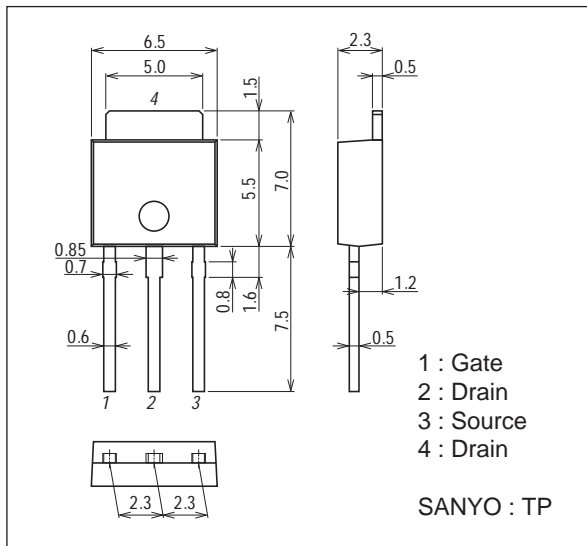
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		600	V
Gate-to-Source Voltage	V_{GSS}		± 30	V
Drain Current (DC)	I_D		1.5	A
Drain Current ($PW \leq 10\mu\text{s}$)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycles $\leq 1\%$	6.0	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c=25^\circ\text{C}$	20	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Package Dimensions

unit : mm (typ)

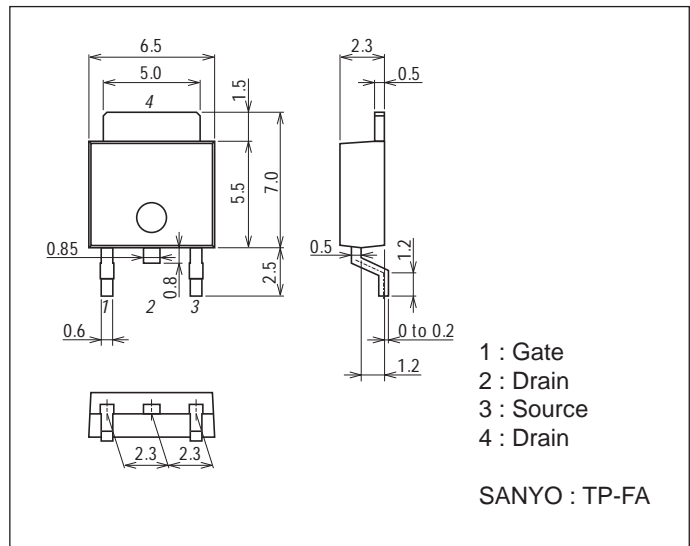
7518-004



Package Dimensions

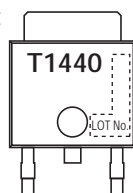
unit : mm (typ)

7003-004



Product & Package Information

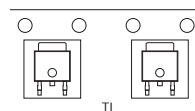
- Package : TP
 - JEITA, JEDEC : SC-64, TO-251, SOT553
 - Minimum Packing Quantity : 500 pcs./bag
- Marking(TP, TP-FA)



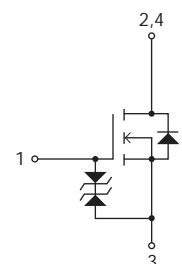
Product & Package Information

- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252, SOT428
- Minimum Packing Quantity : 700 pcs./reel

Packing Type(TP-FA) : TL



Electrical Connection



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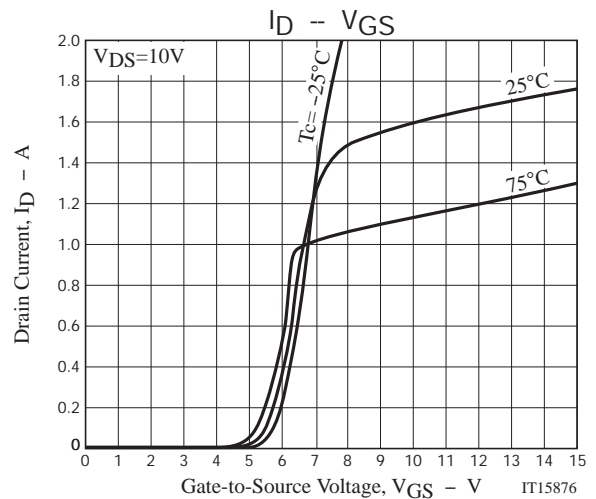
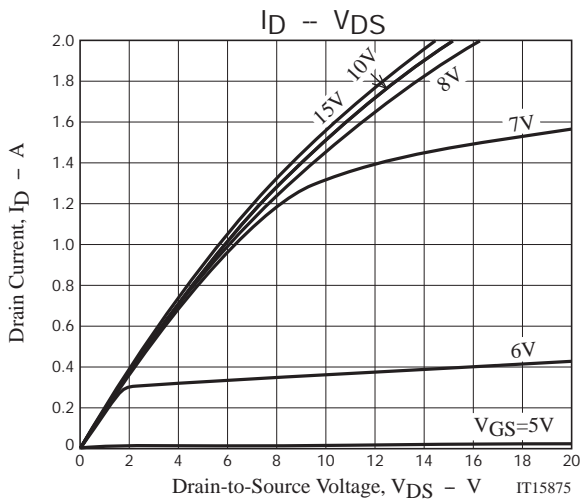
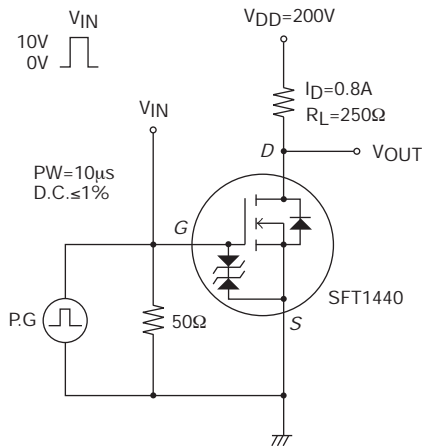
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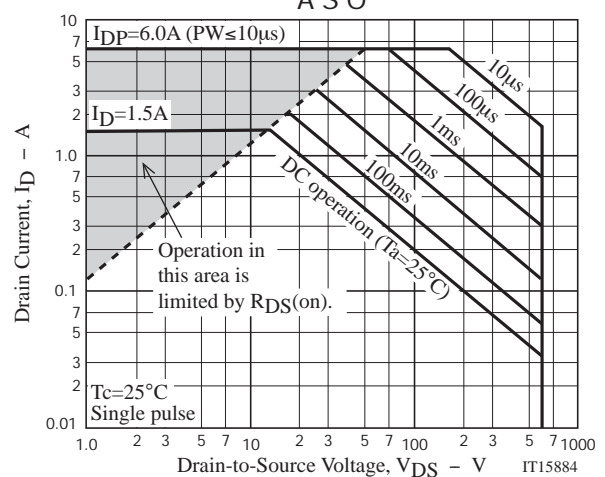
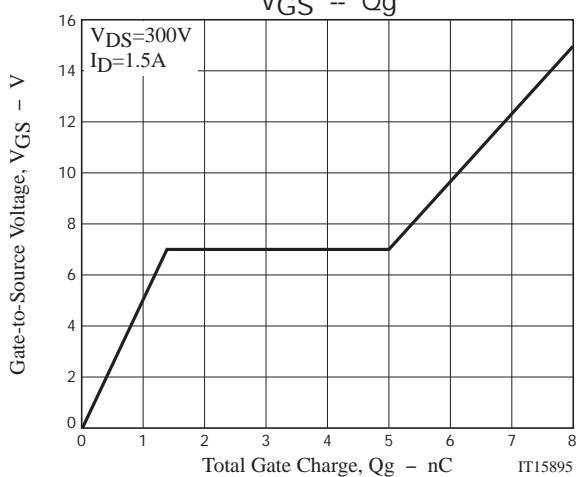
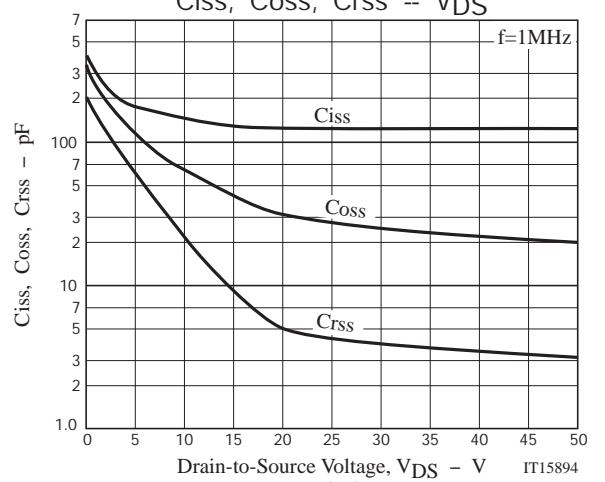
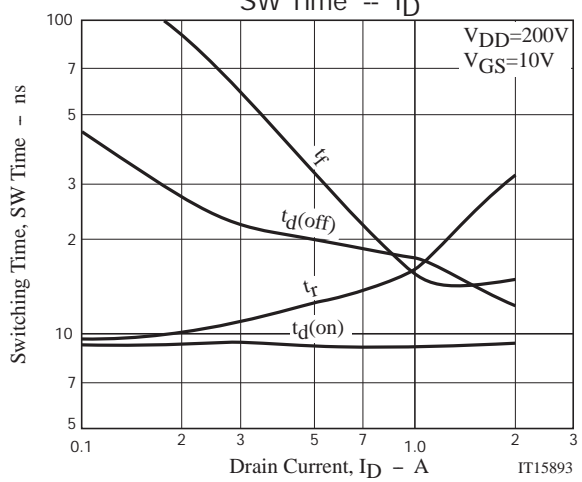
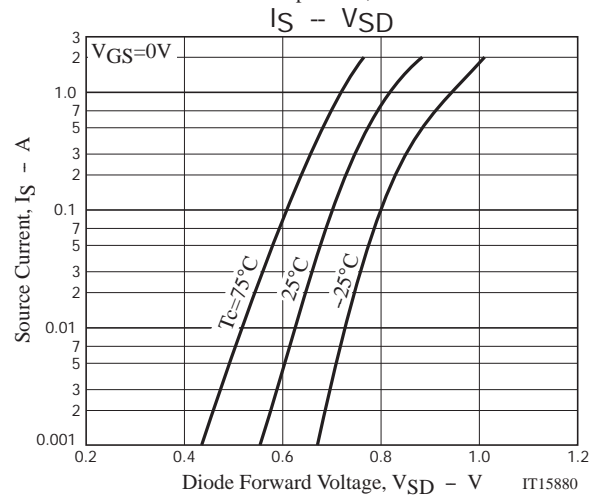
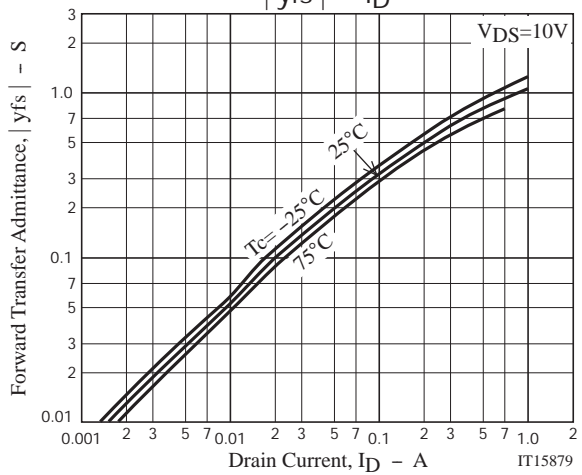
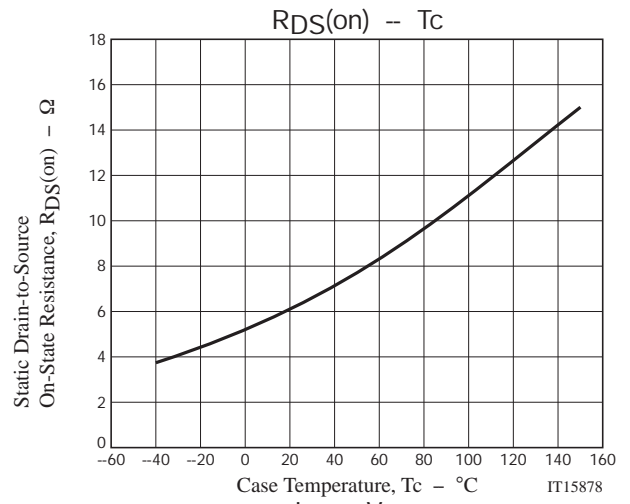
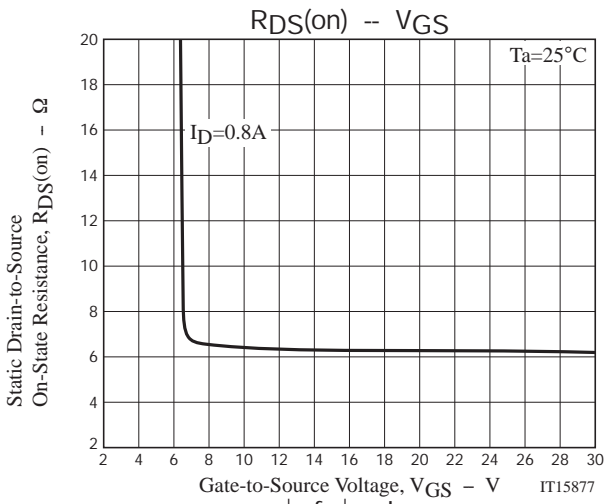
SFT1440

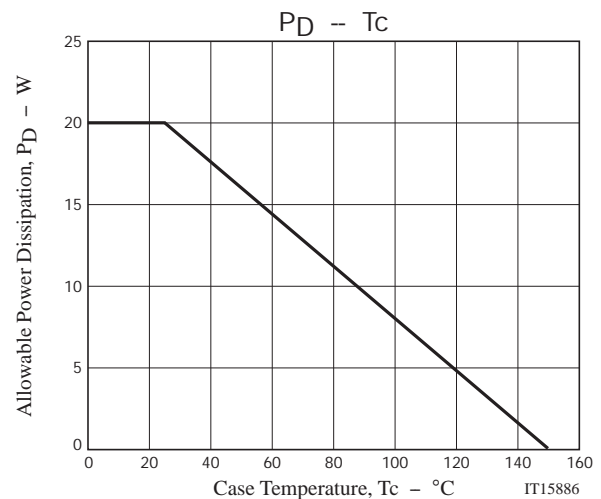
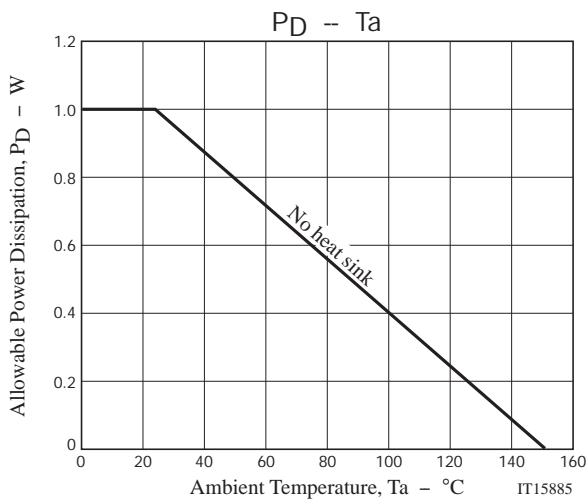
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=10mA, V_{GS}=0V$	600			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=480V, V_{GS}=0V$			100	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 24V, V_{DS}=0V$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	3.0		5.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=0.8A$		1.0		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=0.8A, V_{GS}=10V$		6.2	8.1	Ω
Input Capacitance	C_{iss}	$V_{DS}=30V, f=1MHz$		130		pF
Output Capacitance	C_{oss}	$V_{DS}=30V, f=1MHz$		25		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=30V, f=1MHz$		4.0		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		9.1		ns
Rise Time	t_r	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		18		ns
Fall Time	t_f	See specified Test Circuit.		19		ns
Total Gate Charge	Q_g	$V_{DS}=300V, V_{GS}=10V, I_D=1.5A$		6.3		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=300V, V_{GS}=10V, I_D=1.5A$		1.4		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=300V, V_{GS}=10V, I_D=1.5A$		3.6		nC
Diode Forward Voltage	V_{SD}	$I_S=1.5A, V_{GS}=0V$		0.85	1.2	V

Switching Time Test Circuit







Note on usage : Since the SFT1440 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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