

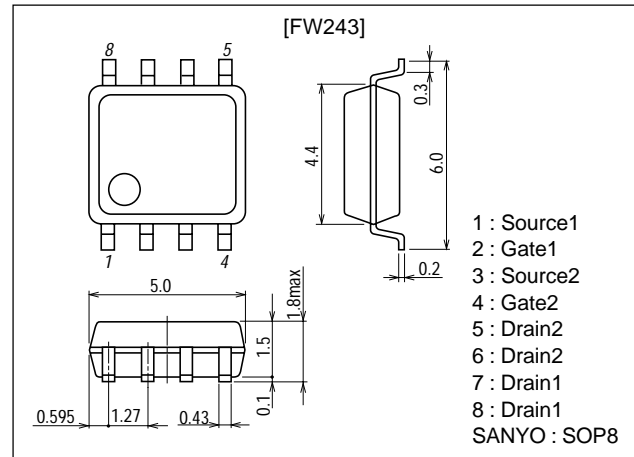
**FW243****DC/DC Converter Applications****Features**

- Low ON resistance.
- 4V drive.

Package Dimensions

unit:mm

2129

**Specifications****Absolute Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		30	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		7	A
Drain Current (pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	52	A
Allowable Power Dissipation	P_D	Mounted on a ceramic board (1000mm ² ×0.8mm) 1unit	1.7	W
Total Dissipation	P_T	Mounted on a ceramic board (1000mm ² ×0.8mm)	2.0	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	$V_{(BR)DSS}$	$I_D=1mA$, $V_{GS}=0$	30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$, $V_{GS}=0$			1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 16V$, $V_{DS}=0$			±10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V$, $I_D=1mA$	1.0		2.4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V$, $I_D=7A$	7.7	11		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=7A$, $V_{GS}=10V$		21	28	mΩ
	$R_{DS(on)2}$	$I_D=4A$, $V_{GS}=4.5V$		29	41	mΩ

Marking : FW243

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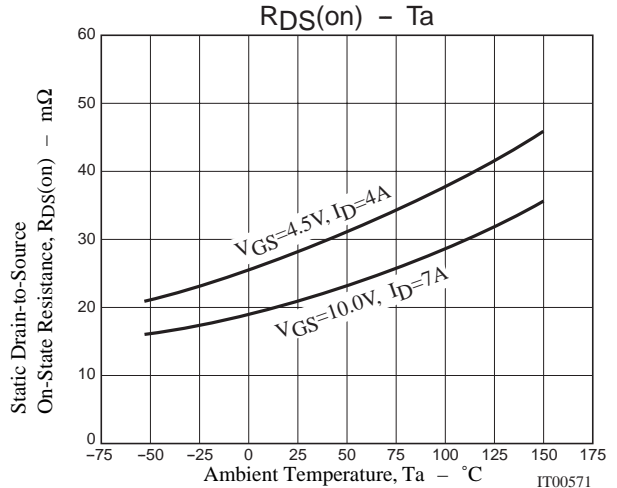
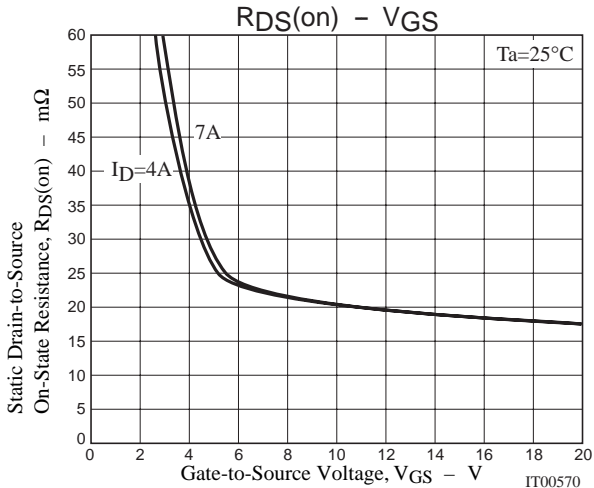
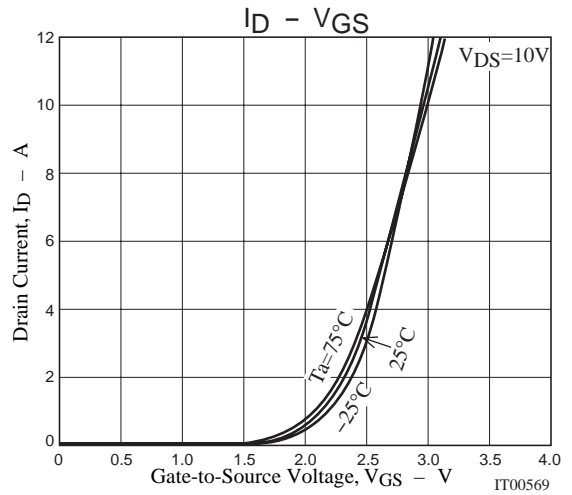
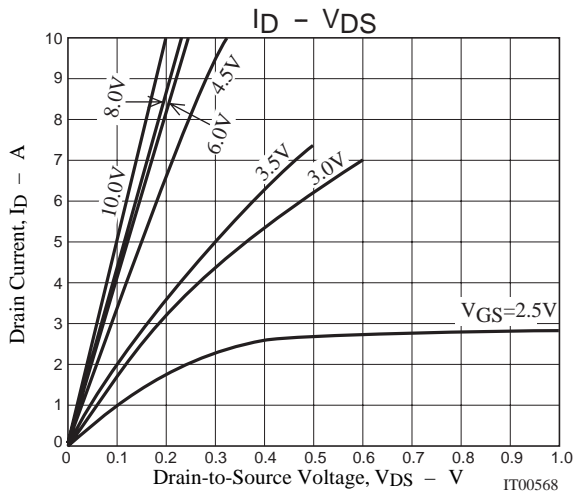
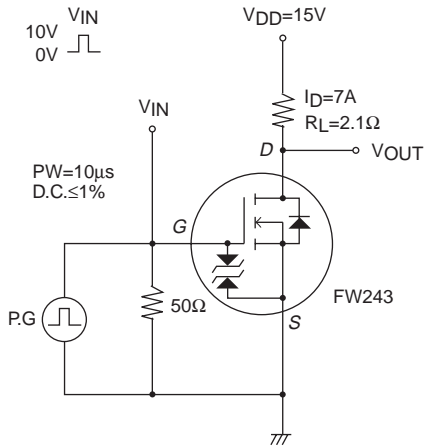
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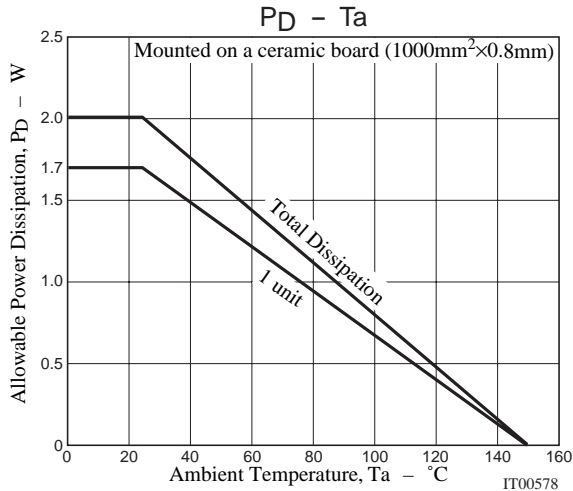
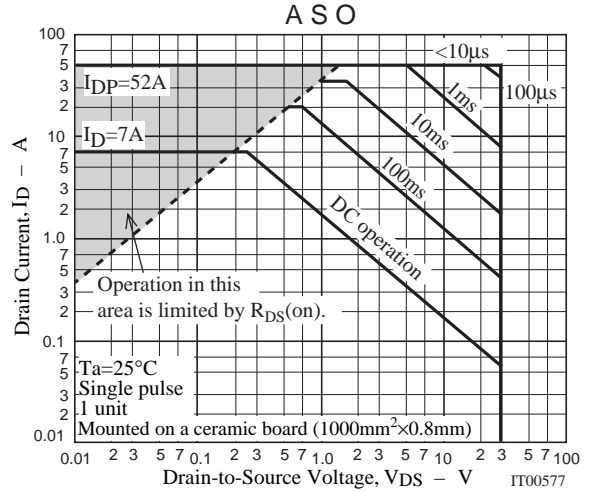
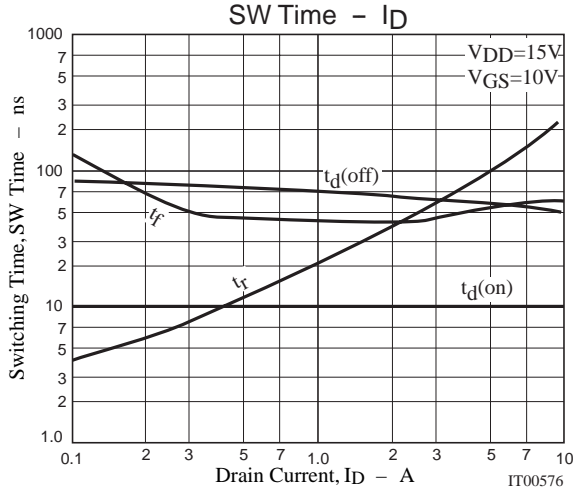
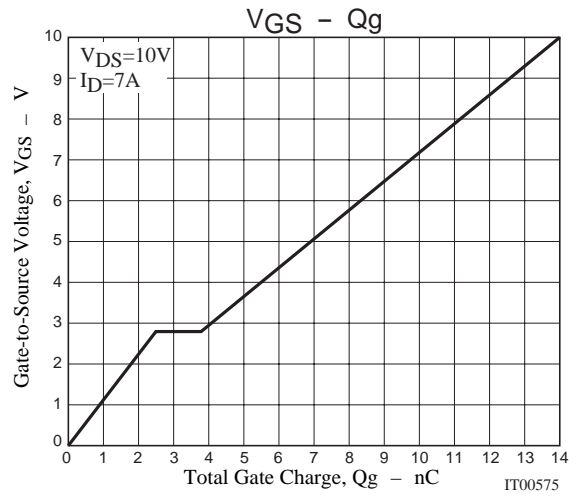
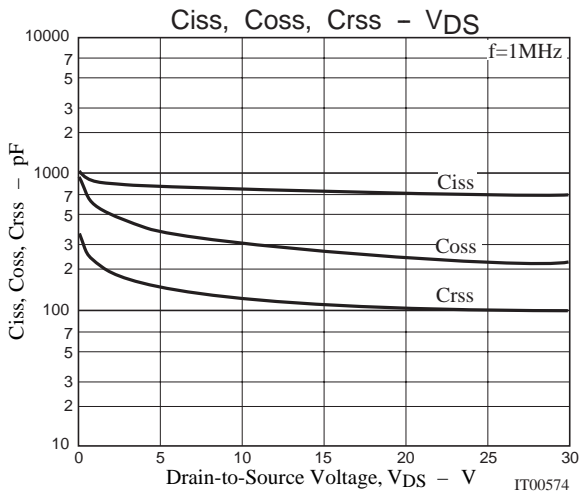
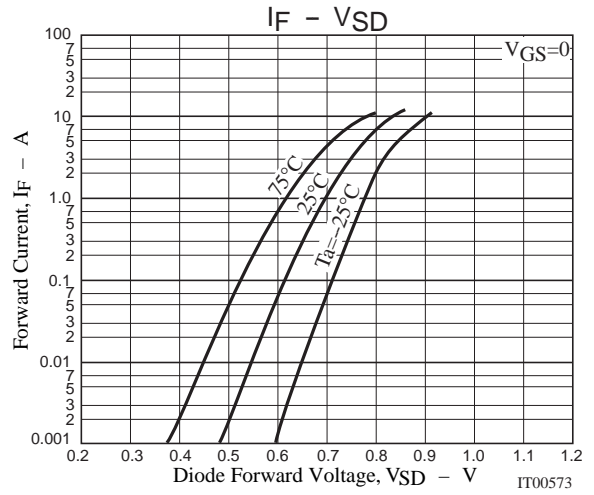
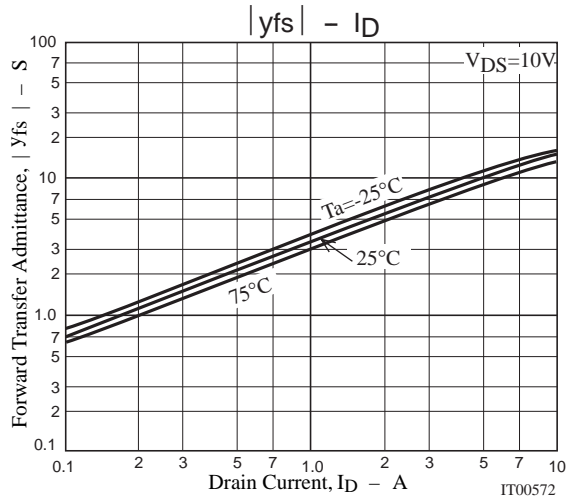
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=10V, f=1MHz$		750		pF
Output Capacitance	Coss	$V_{DS}=10V, f=1MHz$		300		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V, f=1MHz$		120		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		147		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		53		ns
Fall Time	t_f	See specified Test Circuit		58		ns
Total Gate Charge	Qg	$V_{DS}=10V, V_{GS}=10V, I_D=7A$		14		nC
Gate-to-Source Charge	Qgs	$V_{DS}=10V, V_{GS}=10V, I_D=7A$		2.5		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=10V, V_{GS}=10V, I_D=7A$		1.3		nC
Diode Forward Voltage	VSD	$I_S=7A, V_{GS}=0$	0.79		1.2	V

Switching Time Test Circuit



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