

Ordering number : ENN6865

N-Channel Silicon MOSFET



FSS234

DC / DC Converter Applications

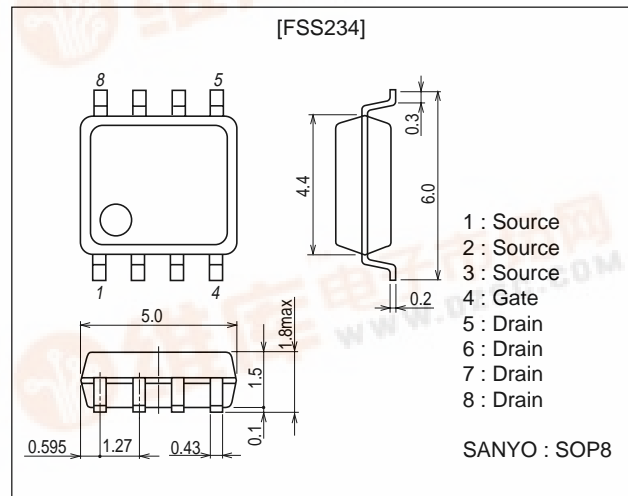
Features

- Low ON-resistance.
- 4.0V drive.
- Ultrahigh-speed switching.

Package Dimensions

unit : mm

2116



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		12	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	52	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (1200mm²×0.8mm)	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} =±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 =12A	12.6	18		S

Marking : S234

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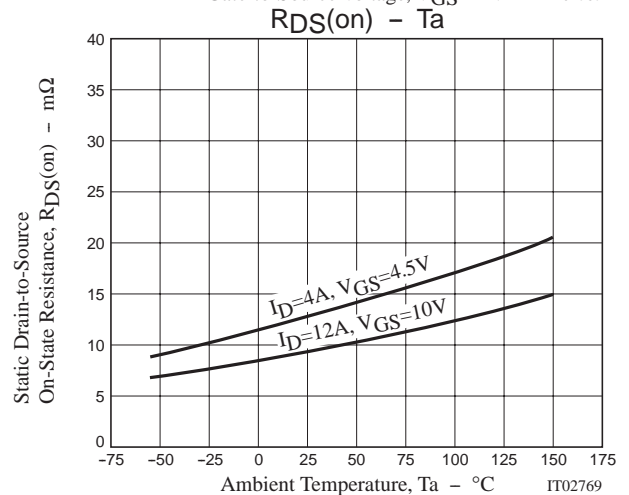
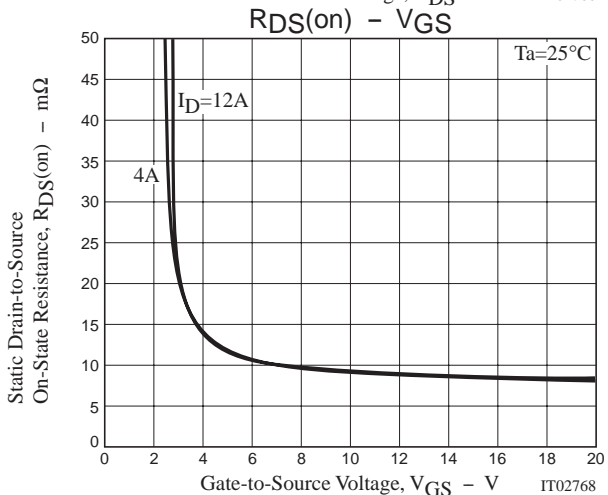
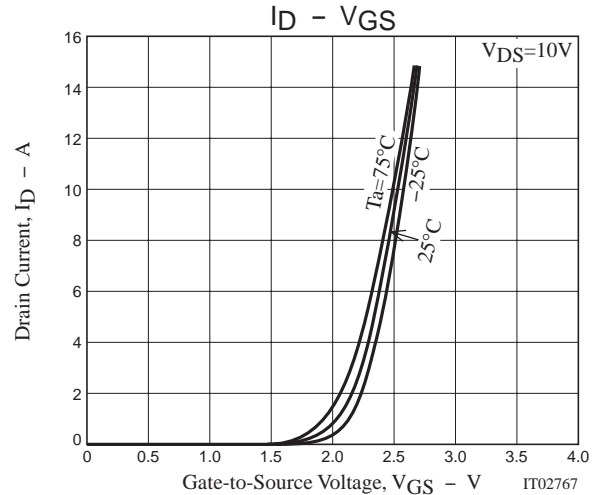
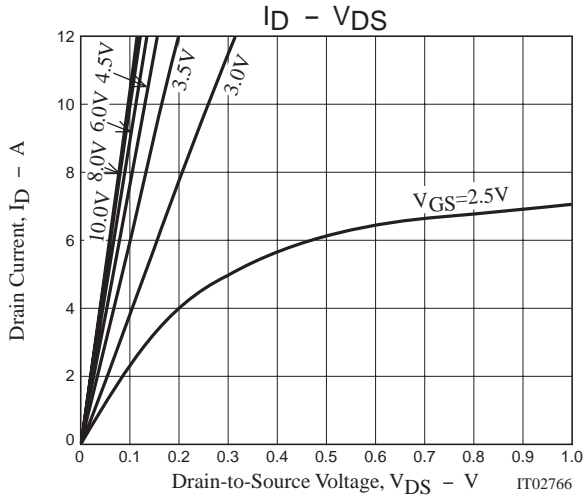
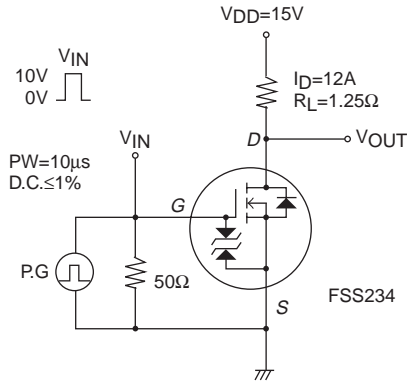


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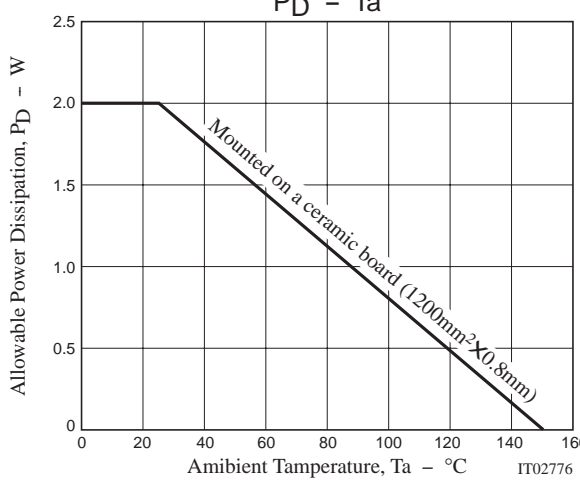
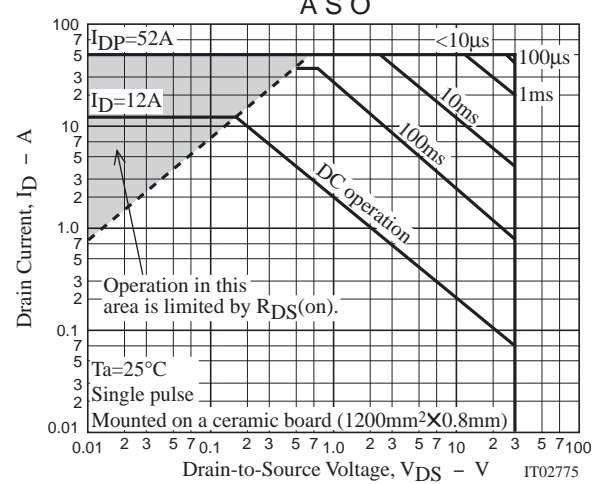
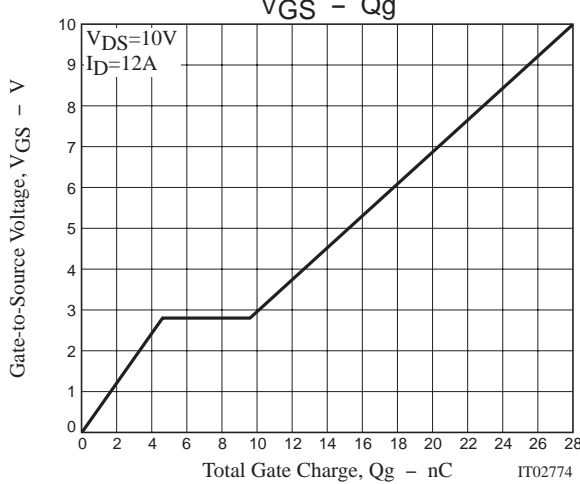
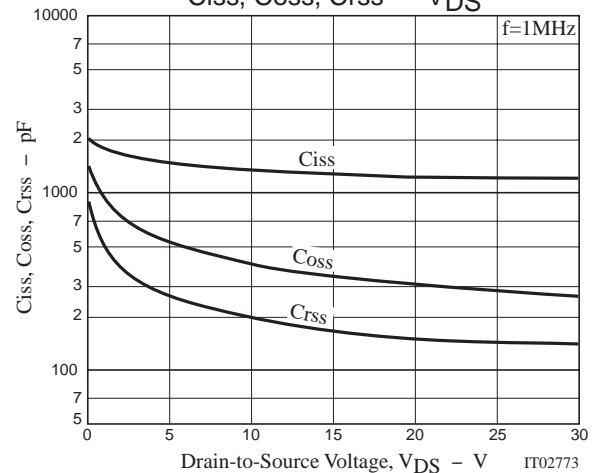
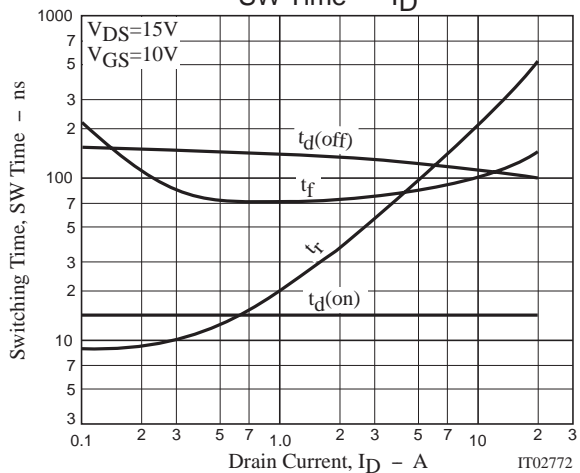
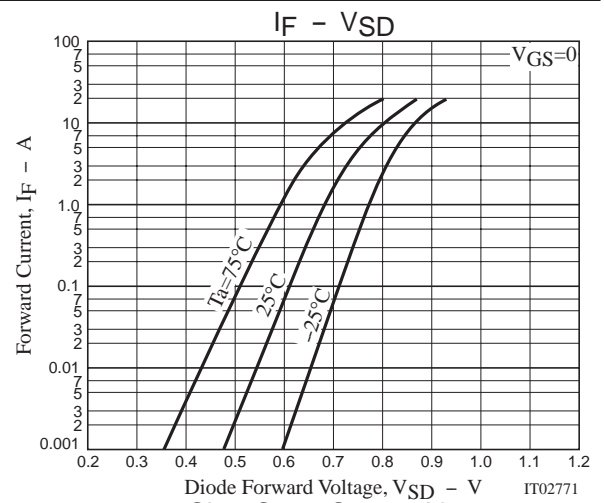
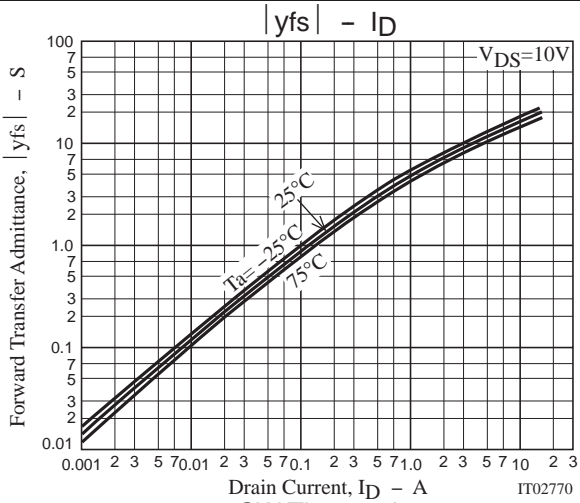
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =12A, V _{GS} =10V		9.5	13	mΩ
	R _{DS(on)2}	I _D =4A, V _{GS} =4.5V		13	19	mΩ
Input Capacitance	C _{iss}	V _{DS} =10V, f=1MHz		1450		pF
Output Capacitance	C _{oss}	V _{DS} =10V, f=1MHz		420		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =10V, f=1MHz		210		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		14		ns
Rise Time	t _r	See specified Test Circuit		280		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		110		ns
Fall Time	t _f	See specified Test Circuit		100		ns
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =10V, I _D =12A		28		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =10V, V _{GS} =10V, I _D =12A		4.6		nC
Gate-to-Drain "Miller" Charge	Q _{gd}	V _{DS} =10V, V _{GS} =10V, I _D =12A		5		nC
Diode Forward Voltage	V _{SD}	I _S =12A, V _{GS} =0		0.81	1.2	V

Switching Time Test Circuit



FSS234



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