

Ordering number : ENN6938

N-Channel Silicon MOSFET

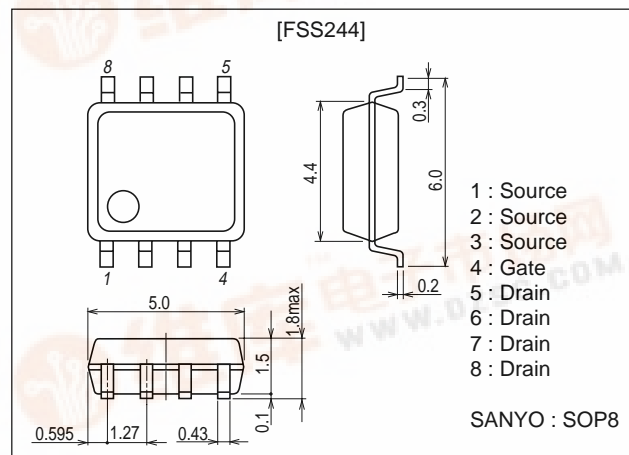
SANYO**FSS244****DC / DC Converter Applications****Features**

- Low ON-resistance.
- 4V 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 _{GS}		±20	V
Drain Current (DC)	I _D		10	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	52	A
Allowable Power Dissipation	P _D	Mounted on a ceramic board (1200mm²X0.8mm) 1unit	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 =10A	12	18		S

Marking : S244

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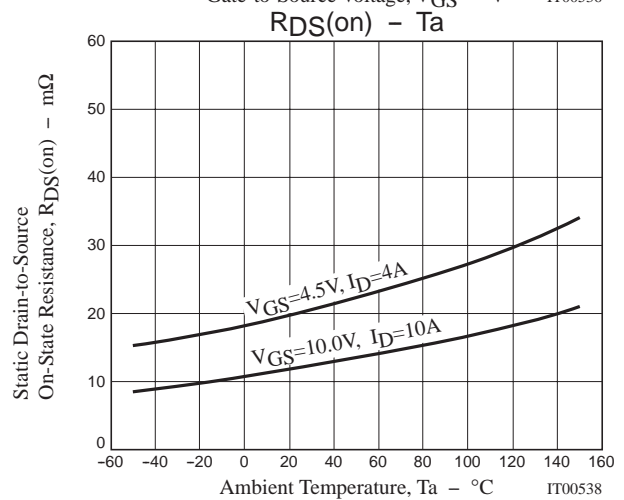
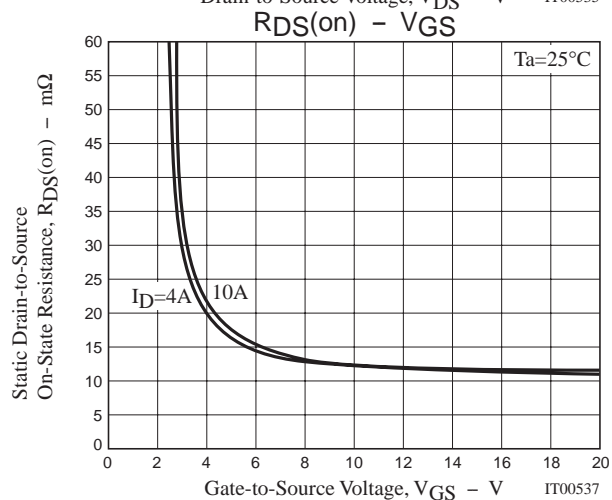
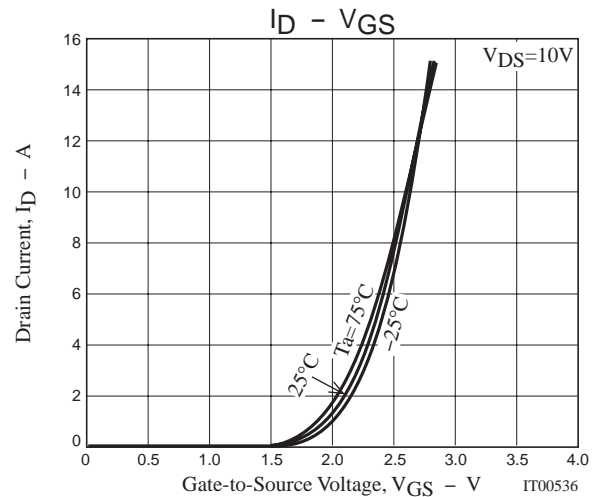
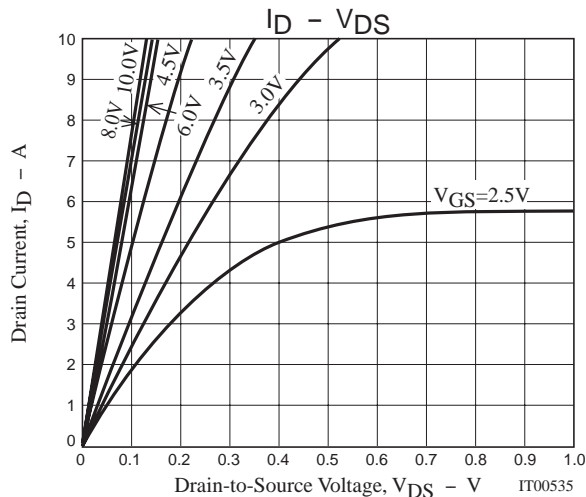
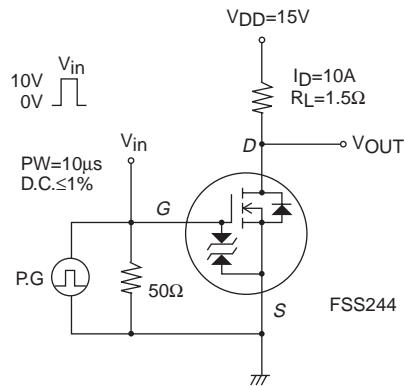
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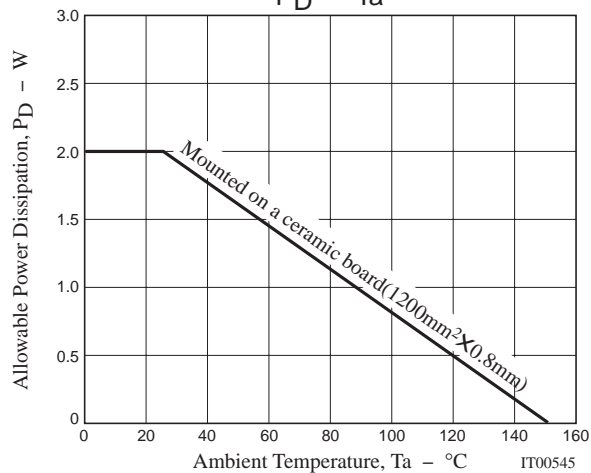
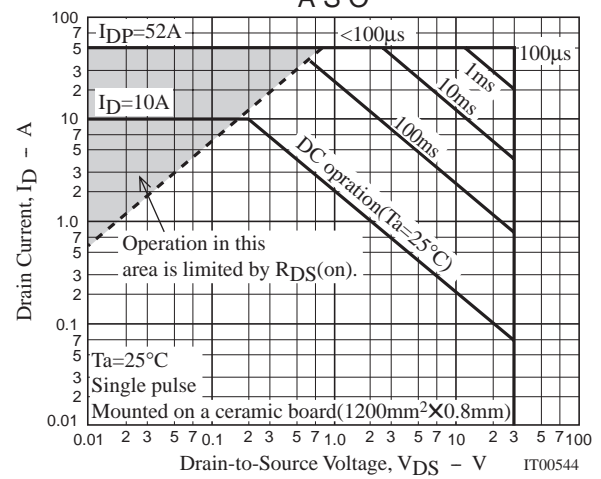
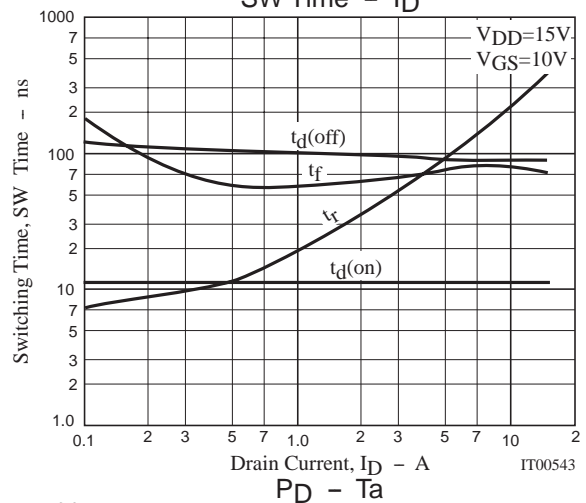
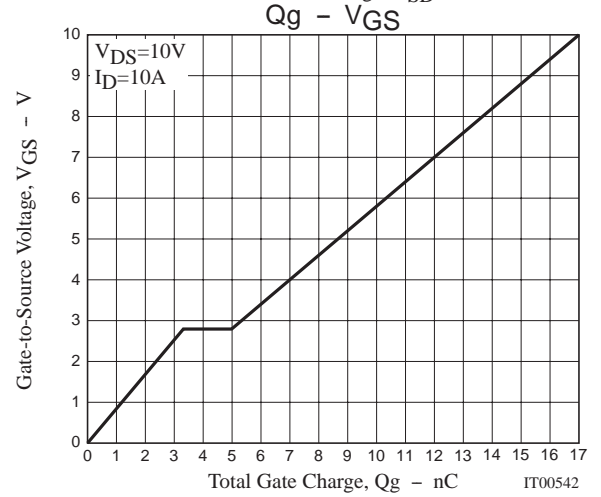
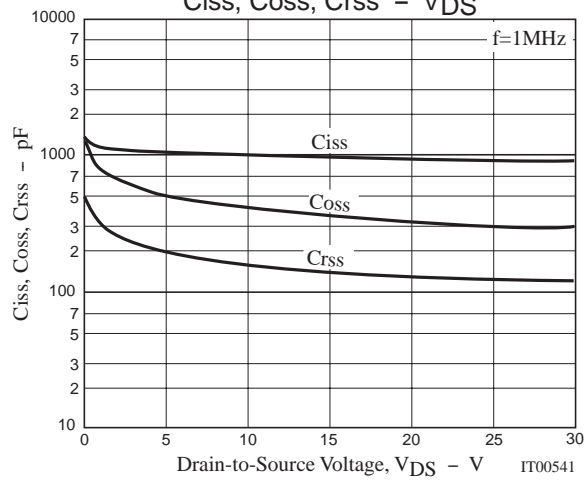
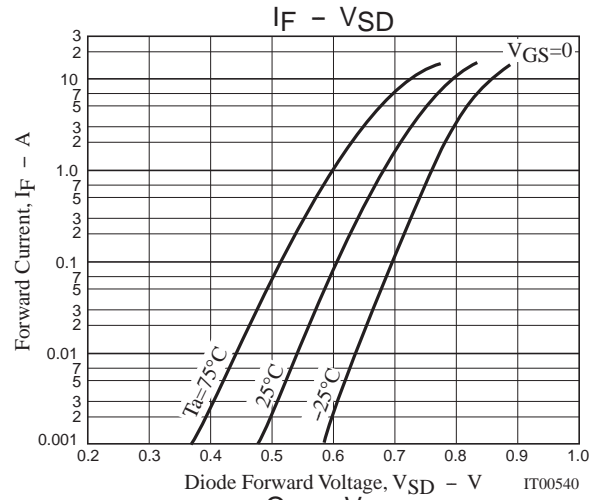
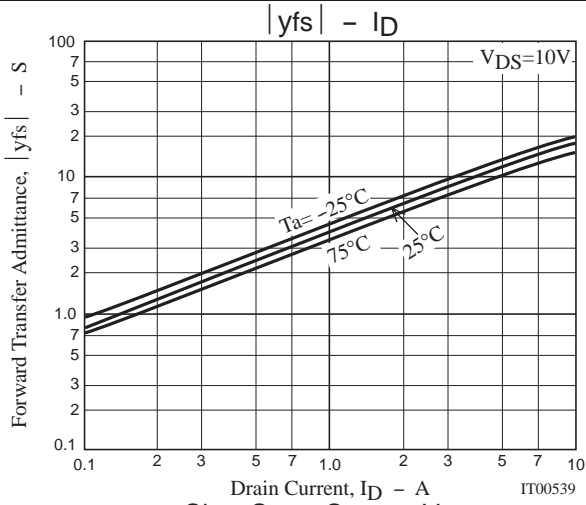
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=10A, V_{GS}=10V$		13	17	$m\Omega$
	$R_{DS(on)2}$	$I_D=4A, V_{GS}=4.5V$		20	28	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10V, f=1MHz$		980		pF
Output Capacitance	C_{oss}	$V_{DS}=10V, f=1MHz$		410		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, f=1MHz$		170		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		11		ns
Rise Time	t_r	See specified Test Circuit		210		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit		80		ns
Fall Time	t_f	See specified Test Circuit		85		ns
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=10V, I_D=10A$		17		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=10V, V_{GS}=10V, I_D=10A$		3.3		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=10V, V_{GS}=10V, I_D=10A$		1.7		nC
Diode Forward Voltage	V_{SD}	$I_S=10A, V_{GS}=0$		0.8	1.2	V

Switching Time Test Circuit



FSS244



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