



SANYO Semiconductors

DATA SHEET

P-Channel Silicon MOSFET

EC4305C — General-Purpose Switching Device Applications

Features

- 4V drive.
- Halogen free compliance (UL94 HB).

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		-200	mA
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-800	mA
Allowable Power Dissipation	P _D	Mounted on a glass-epoxy printed circuit board (145X80X1.6mm)	0.15	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} =0V	-30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-100μA	-1.2		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-100mA	150	250		mS
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-100mA, V _{GS} =-10V		1.4	1.9	Ω
	R _{DS(on)2}	I _D =-50mA, V _{GS} =-4V		2.8	4.0	Ω
Input Capacitance	C _{iss}	V _{DS} =-10V, f=1MHz		22		pF
Output Capacitance	C _{oss}	V _{DS} =-10V, f=1MHz		6.0		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-10V, f=1MHz		3.5		pF

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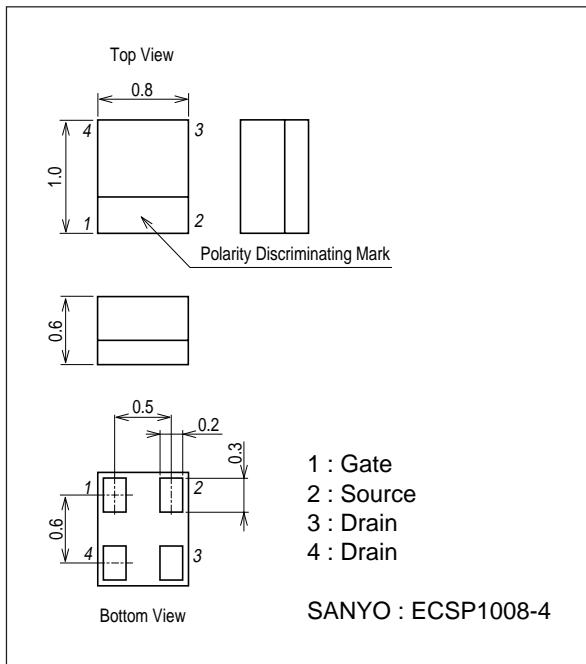
EC4305C

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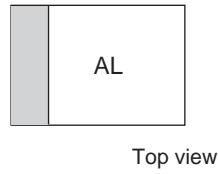
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			min	typ	max	
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		34		ns
Rise Time	t_r	See specified Test Circuit.		59		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		435		ns
Fall Time	t_f	See specified Test Circuit.		250		ns
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{GS}=-10V, I_D=-200mA$		1.6		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-200mA$		0.5		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=-10V, V_{GS}=-10V, I_D=-200mA$		0.1		nC
Diode Forward Voltage	V_{SD}	$I_S=-200mA, V_{GS}=0V$		-0.86	-1.2	V

Package Dimensions

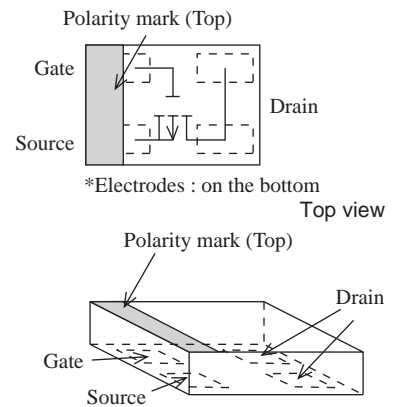
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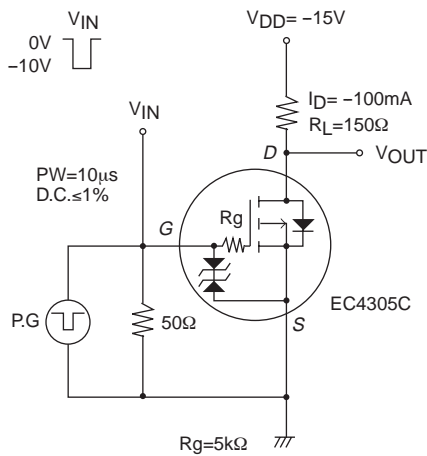
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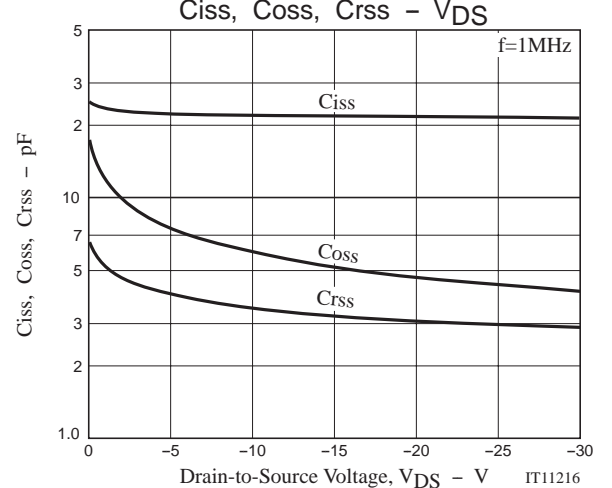
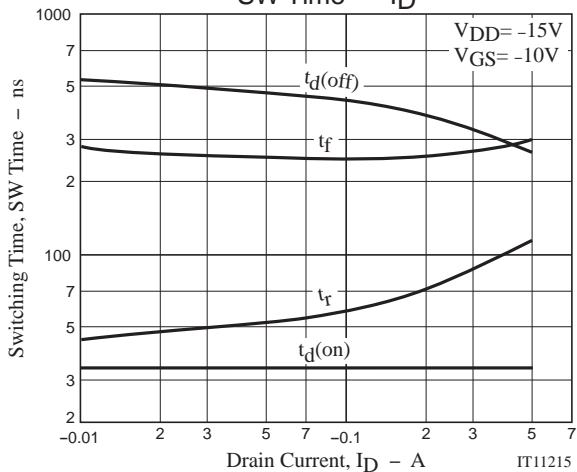
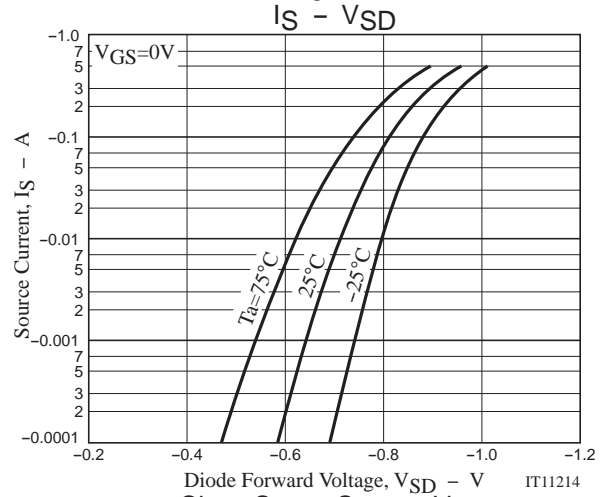
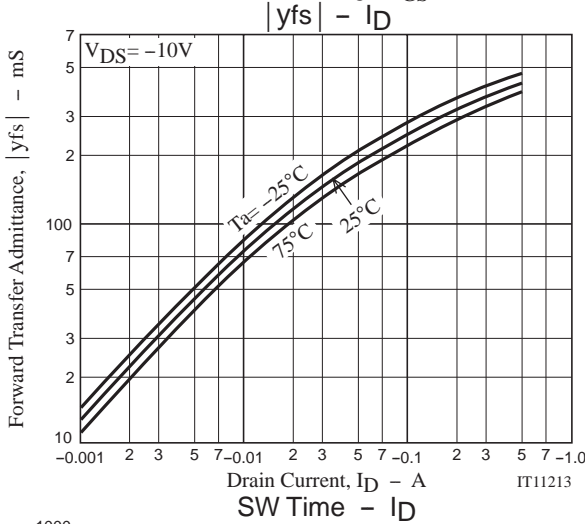
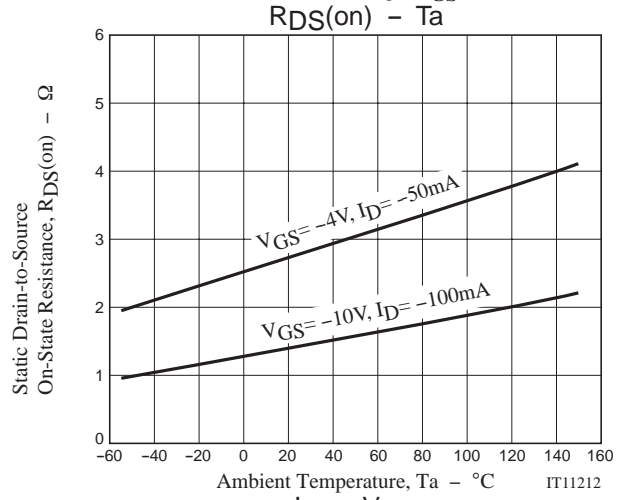
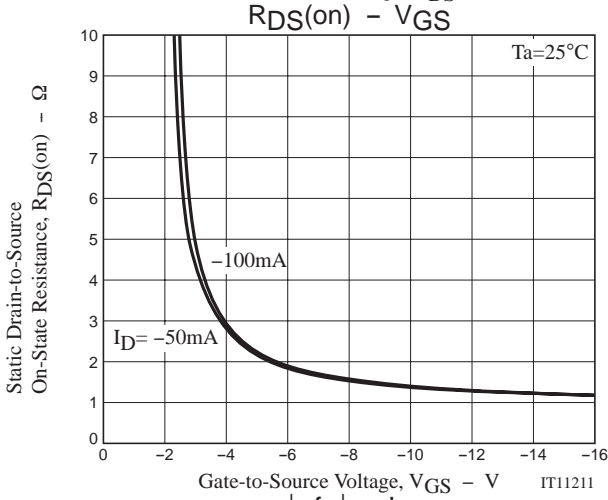
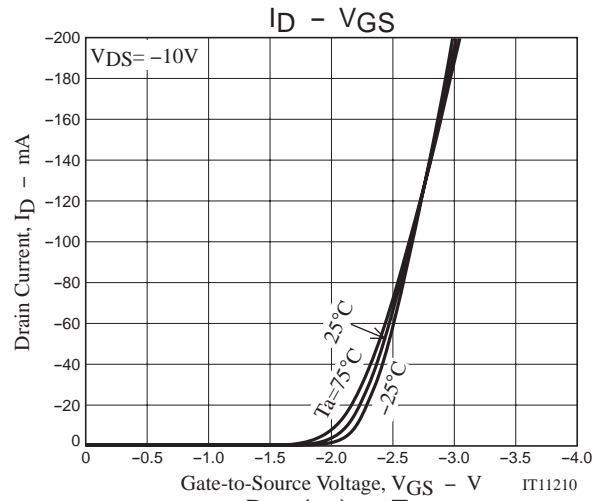
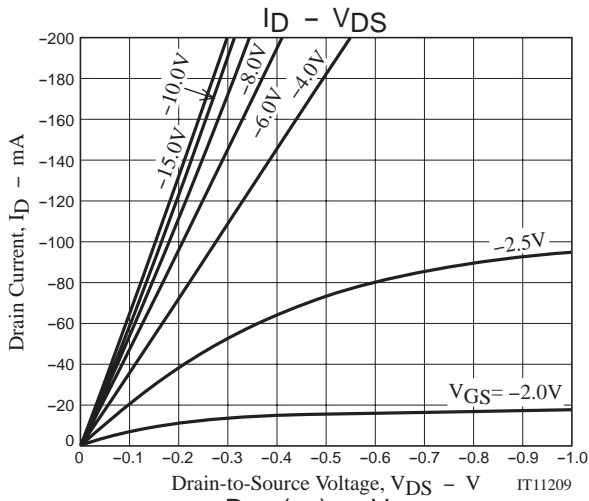
Electrical Connection



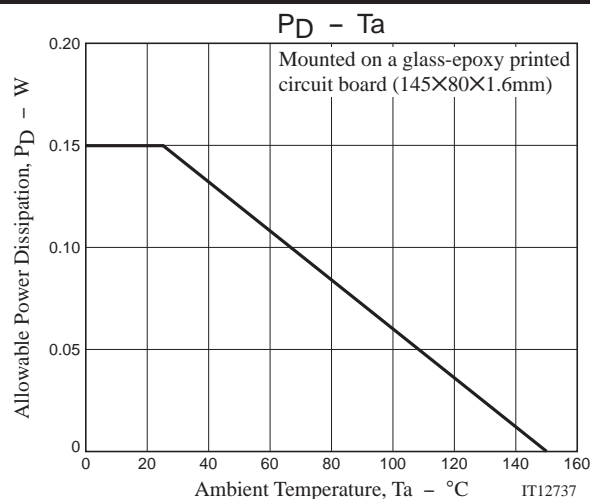
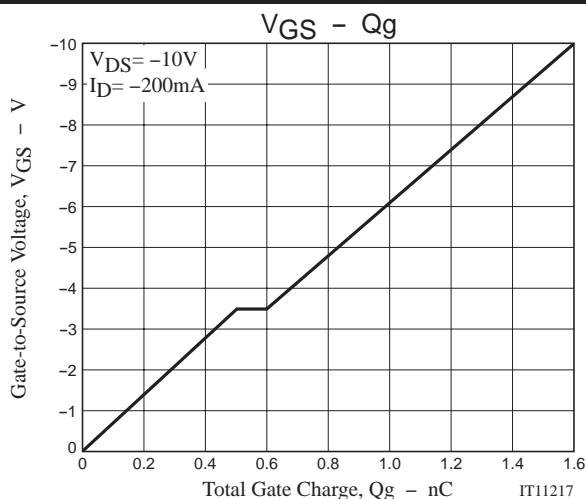
Switching Time Test Circuit



EC4305C



EC4305C



Note on usage : Since the EC4305C is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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