

SANYO Semiconductors DATA SHEET

N-Channel Silicon MOSFET

EC4408C — 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	VDSS		60	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ID		200	mA
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	800	mA
Allowable Power Dissipation	PD	When mounted on glass epoxy substrate (145mmX80mmX1.6mm)	0.15	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Lloit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	60			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =60V, V _{GS} =0V			1	μΑ
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =100μA	1.2		2.6	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =100mA	140	240		mS
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=100mA, VGS=10V		1.8	2.4	Ω
	R _{DS} (on)2	ID=50mA, VGS=4V		2.6	3.7	Ω
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		27		pF
Output Capacitance	Coss	VDS=20V, f=1MHz		8.6		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		4.4		pF

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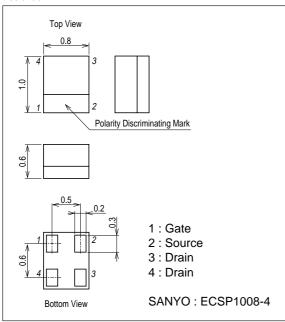
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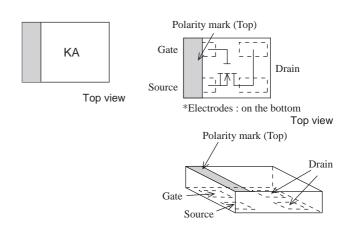
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		13.5		ns
Rise Time	t _r	See specified Test Circuit.		11.5		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		81		ns
Fall Time	tf	See specified Test Circuit.		39		ns
Total Gate Charge	Qg	V _{DS} =30V, V _{GS} =10V, I _D =200mA		1.88		nC
Gate-to-Source Charge	Qgs	V _{DS} =30V, V _{GS} =10V, I _D =200mA		0.4		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =30V, V _{GS} =10V, I _D =200mA		0.37		nC
Diode Forward Voltage	V _{SD}	I _S =200mA, V _{GS} =0V		0.85	1.2	V

Package Dimensions

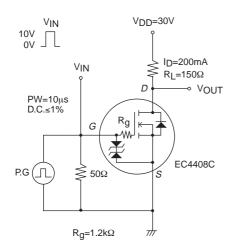
unit : mm (typ) 7036-001

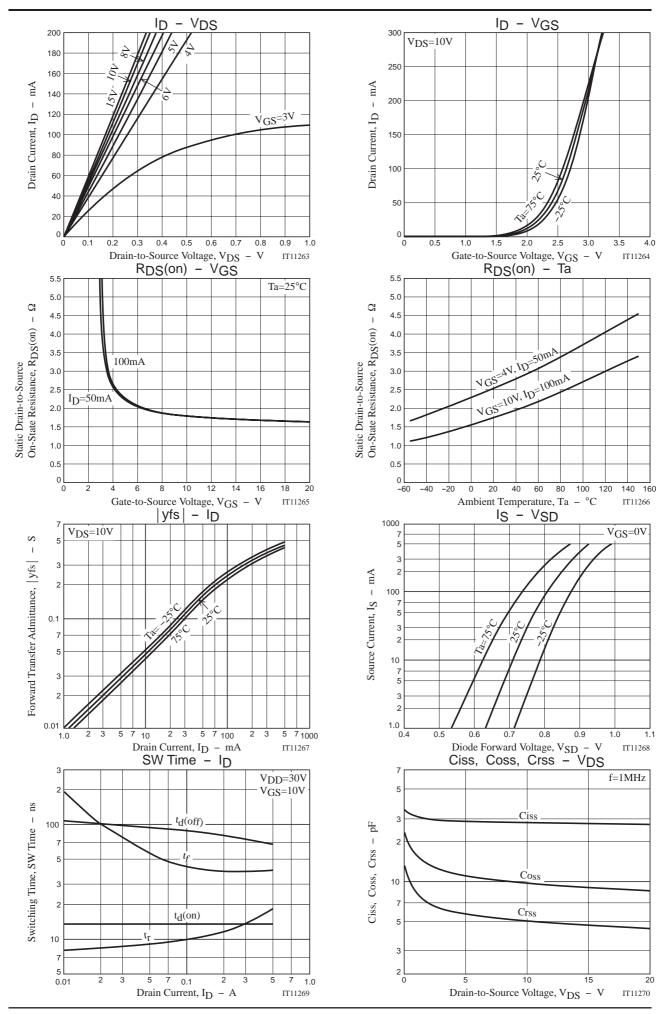


Type No. Indication Electrical Connection

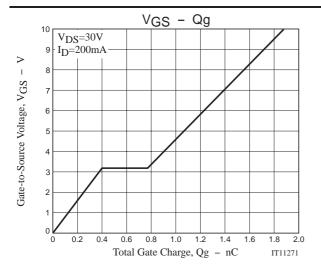


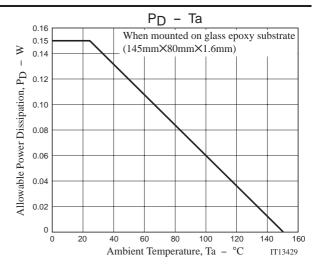
Switching Time Test Circuit





EC4408C





Note on usage: Since the EC4408C is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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