

SANYO Semiconductors DATA SHEET

N-Channel Silicon MOSFET

EC4407KF — General-Purpose Switching Device **Applications**

Features

- · Low ON-resistance.
- 1.8V drive.
- mounting height: 0.4mm.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		20	V
Gate-to-Source Voltage	VGSS		±10	٧
Drain Current (DC)	ID		1.3	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	4.8	Α
Allowable Power Dissipation	PD	Mounted on a glass epoxy board	0.4	W
Channel Temperature	Tch		150	ô
Storage Temperature	Tstg		-55 to +150	ô

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			1.1
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0V	20			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =20V, V _{GS} =0V			10	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	0.4		1.3	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =0.6A	0.96	1.6		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =0.6A, V _{GS} =4V		170	224	mΩ
	R _{DS} (on)2	I _D =0.3A, V _{GS} =2.5V		240	333	$m\Omega$
	RDS(on)3	ID=0.1A, VGS=1.8V		335	475	$m\Omega$
Input Capacitance	Ciss	V _{DS} =10V, f=1MHz		100		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		22		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		15		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		5.5		ns
Rise Time	t _r	See specified Test Circuit.		9		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		19		ns
Fall Time	tf	See specified Test Circuit.		7.5		ns

Continued on next page.

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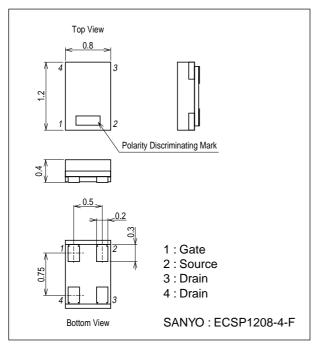
EC4407KF

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Parameter	Symbol	Conditions	Ratings			Unit
	Symbol		min	typ	max	Oill
Total Gate Charge	Qg	V _{DS} =10V, V _{GS} =10V, I _D =1.3A		4.5		nC
Gate-to-Source Charge	Qgs	V _{DS} =10V, V _{GS} =10V, I _D =1.3A		0.4		nC
Gate-to-Drain "Miller" Charge	Qgd	VDS=10V, VGS=10V, ID=1.3A		0.4		nC
Diode Forward Voltage	VSD	IS=1.3A, VGS=0V		0.89	1.2	V

Package Dimensions

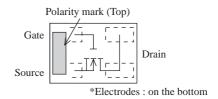
unit : mm 7043-001



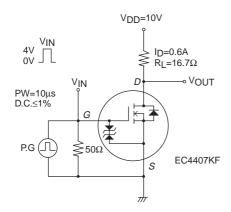
Type No. Indication(Top view)

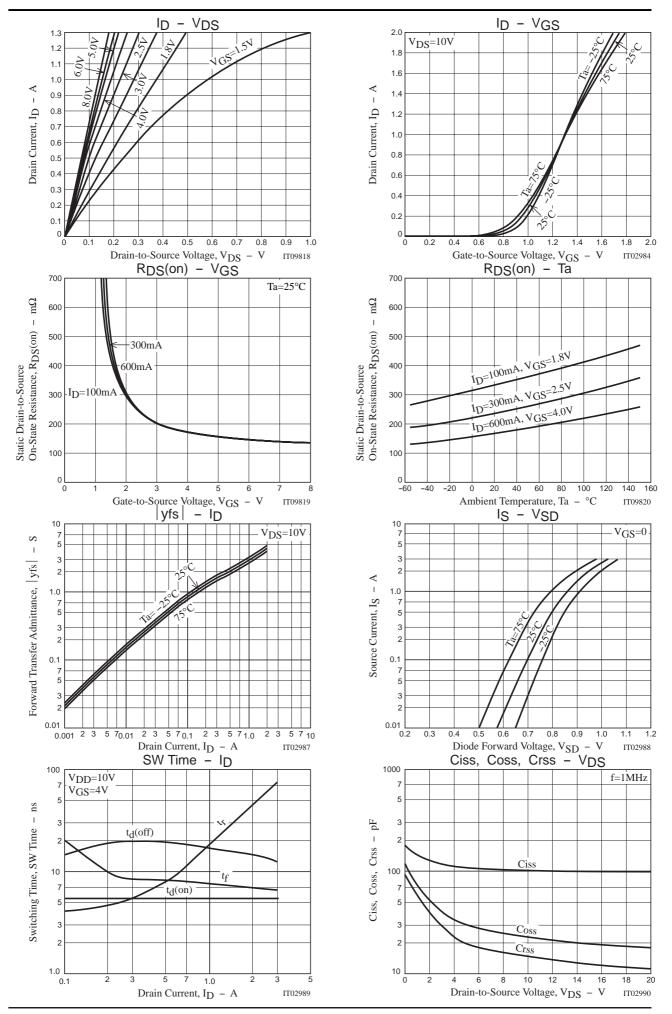


Electrical Connection(Top view)

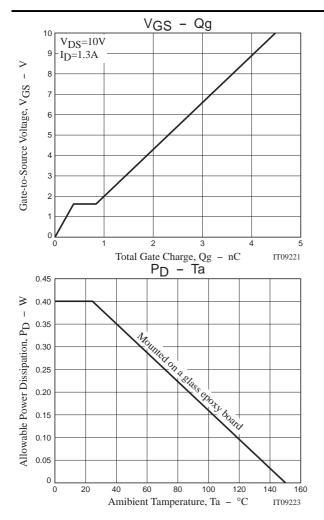


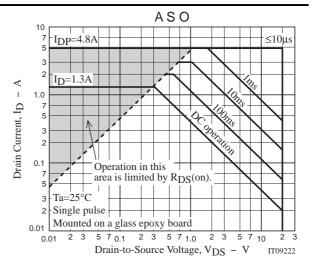
Switching Time Test Circuit





EC4407KF





Note on usage: Since the EC4407KF is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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