

SANYO Semiconductors DATA SHEET

2SK3615— General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Ultrahigh-speed switching.
- 4V drive.

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		12	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	48	Α
Allowable Power Dissipation	Po		1	W
	PD	Tc=25°C	20	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	ç

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Linit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _G S=0V	60			V
Zero-Gate Voltage Drain Current	IDSS	VDS=60V, VGS=0V			1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±16V, V _{DS} =0V			±10	μΑ
Gate-to-Source Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =6A	4.8	8		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	ID=6A, VGS=10V		45	60	mΩ
	RDS(on)2	ID=6A, VGS=4V		60	85	mΩ
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		790		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		115		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		88		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		10		ns
Rise Time	t _r	See specified Test Circuit.		40		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		70		ns
Fall Time	tf	See specified Test Circuit.		60		ns

Marking: K3615 Continued on next page.

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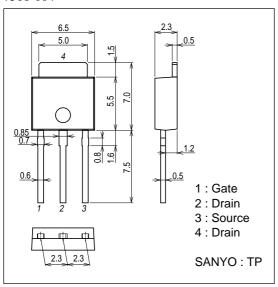
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Total Gate Charge	Qg	V _{DS} =30V, V _{GS} =10V, I _D =12A		16		nC
Gate-to-Source Charge	Qgs	V _{DS} =30V, V _{GS} =10V, I _D =12A		4		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =30V, V _{GS} =10V, I _D =12A		3.4		nC
Diode Forward Voltage	VSD	IS=12A, VGS=0V		1.0	1.2	V

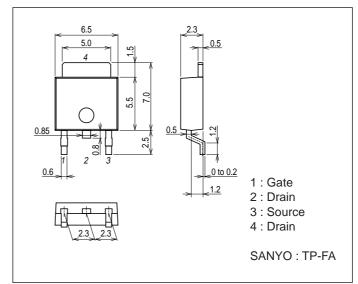
Package Dimensions

unit : mm 7518-004

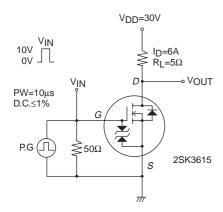


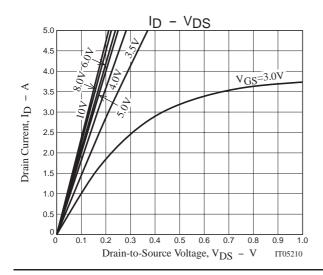
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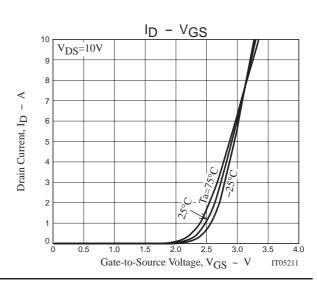
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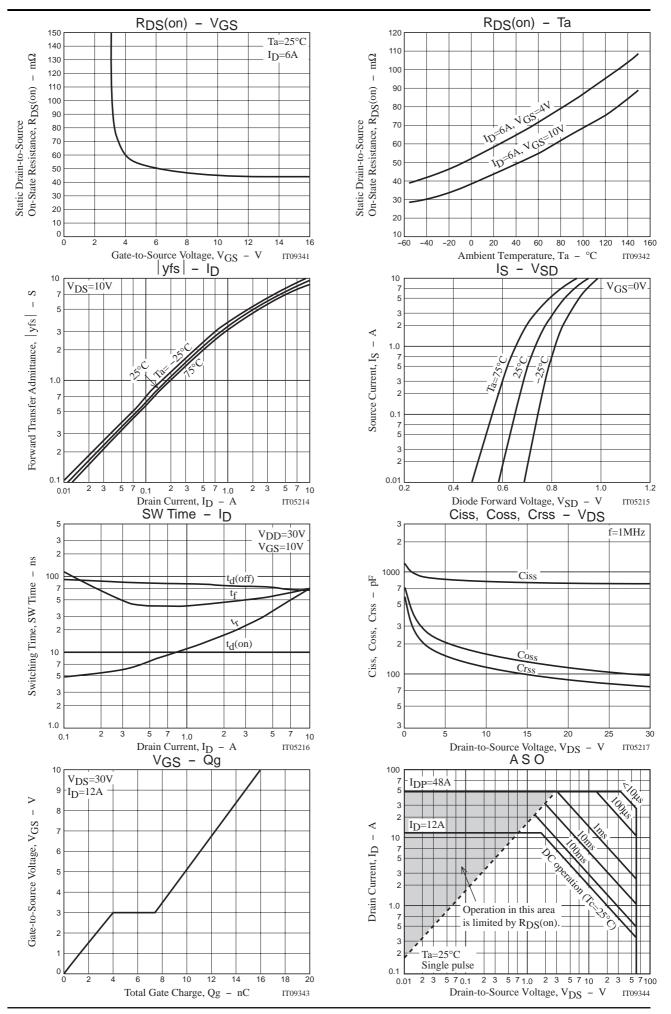


Switching Time Test Circuit

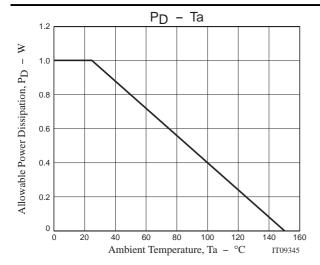


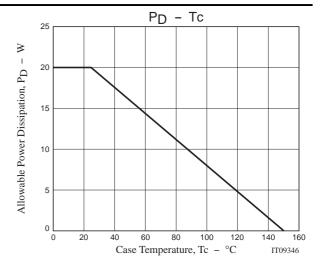






2SK3615





Note on usage: Since the 2SK3615 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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