



SANYO Semiconductors

DATA SHEET

2SK3284 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- Low ON-resistance.
- Low Qg.
- Ultrahigh-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		400	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	I _D		10	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	40	A
Allowable Power Dissipation	P _D	Tc=25°C	50	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	400			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =320V, V _{GS} =0V			1.0	mA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±30V, V _{DS} =0V			±100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	3		4	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =6A	2.9	5.8		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =6A, V _{GS} =15V		0.43	0.55	Ω
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		1150		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		350		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		150		pF
Total Gate Charge	Q _g	V _{DS} =200V, V _{GS} =10V, I _D =10A		40		nC
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		17		ns
Rise Time	t _r	See specified Test Circuit.		30		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		150		ns
Fall Time	t _f	See specified Test Circuit.		50		ns
Diode Forward Voltage	V _{SD}	I _S =10A, V _{GS} =0V			1.2	V

Note) Although the protection diode is contained between gate and source, be careful of handling enough.

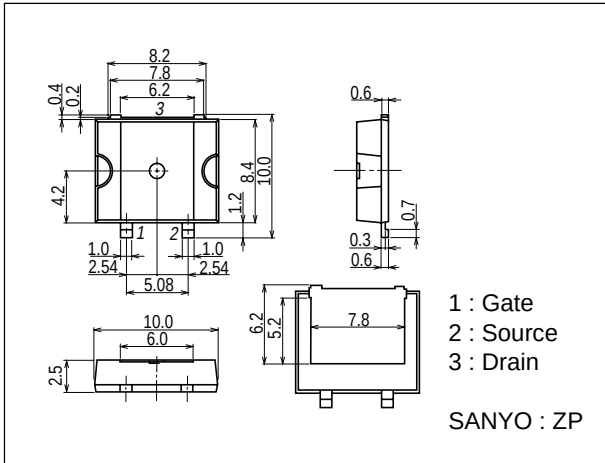
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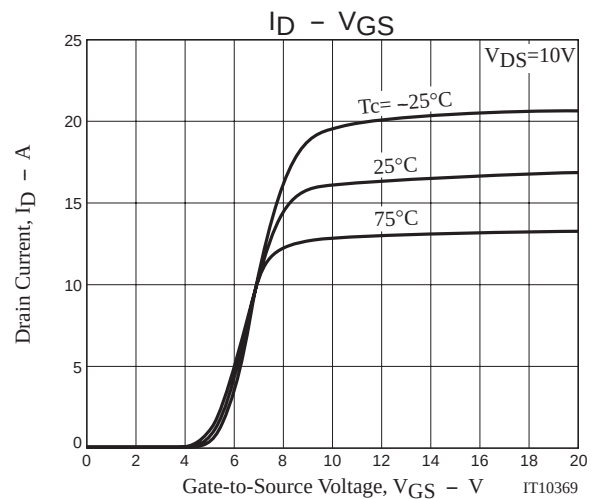
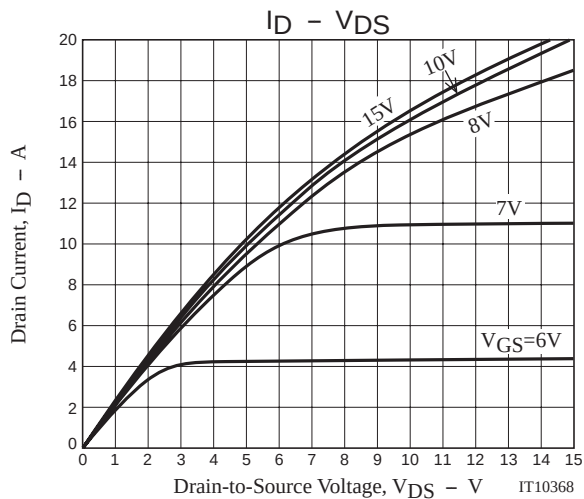
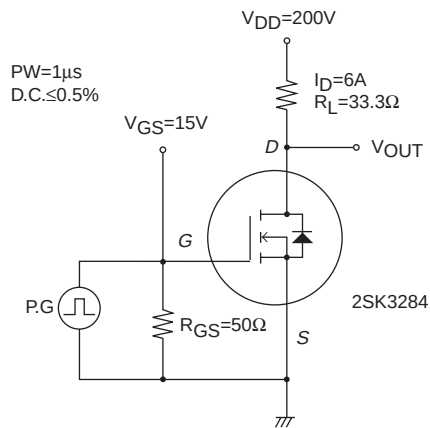
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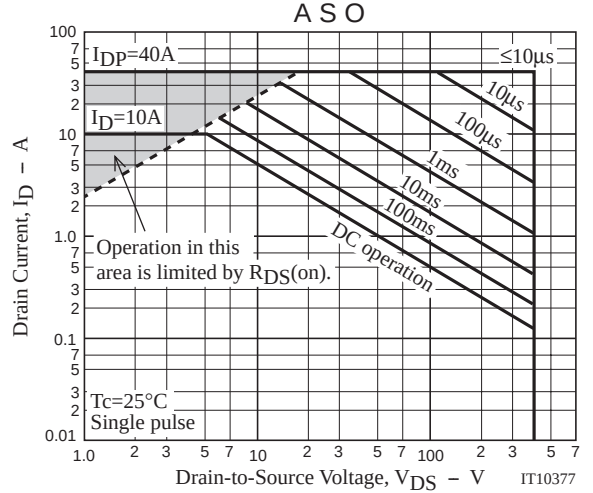
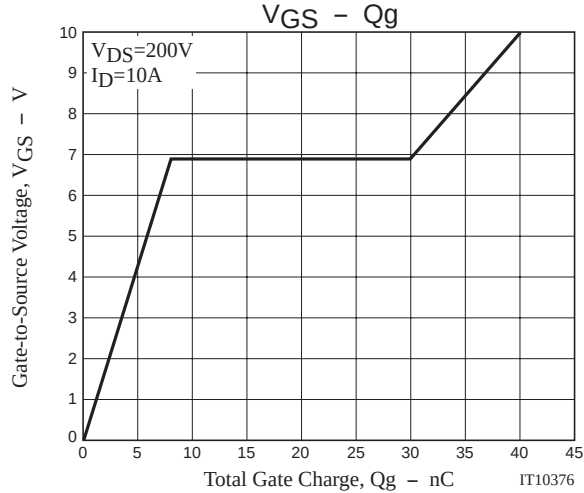
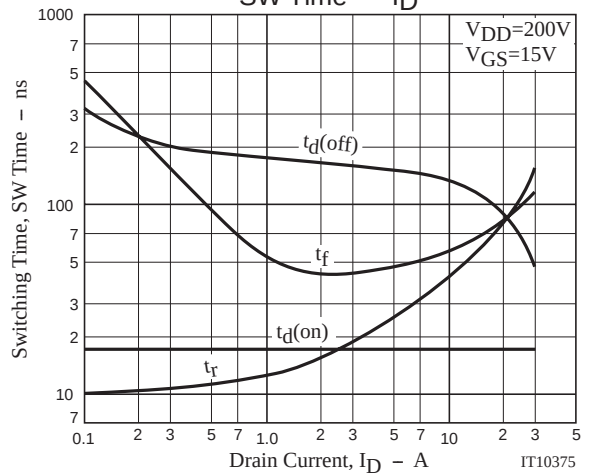
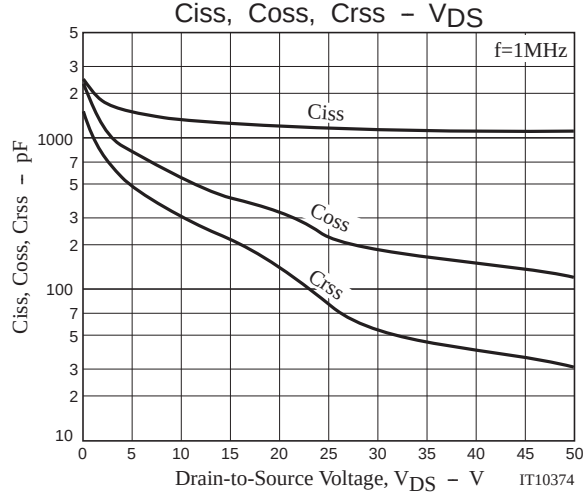
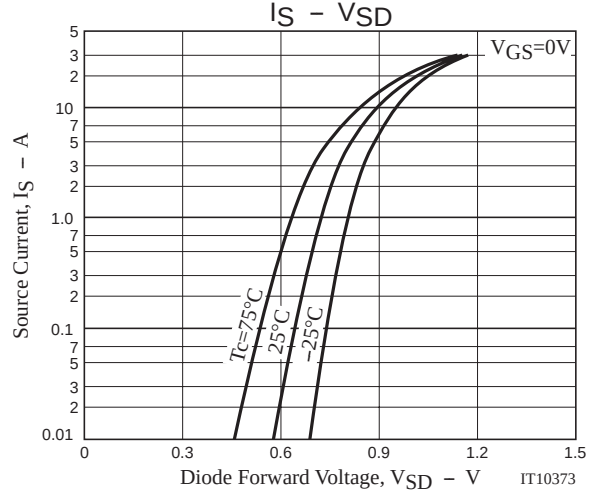
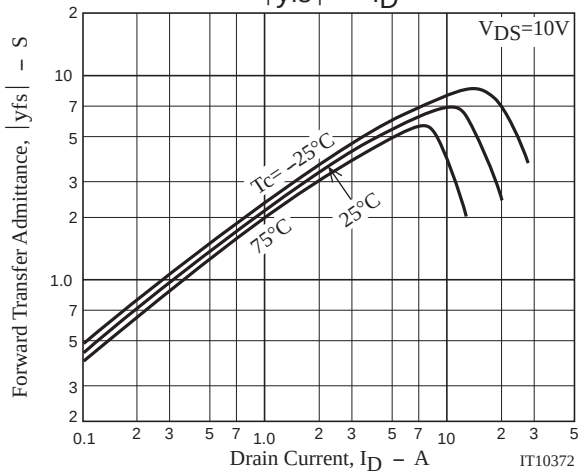
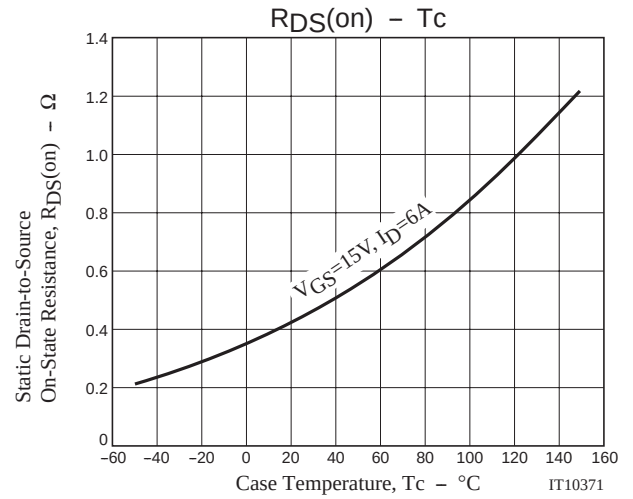
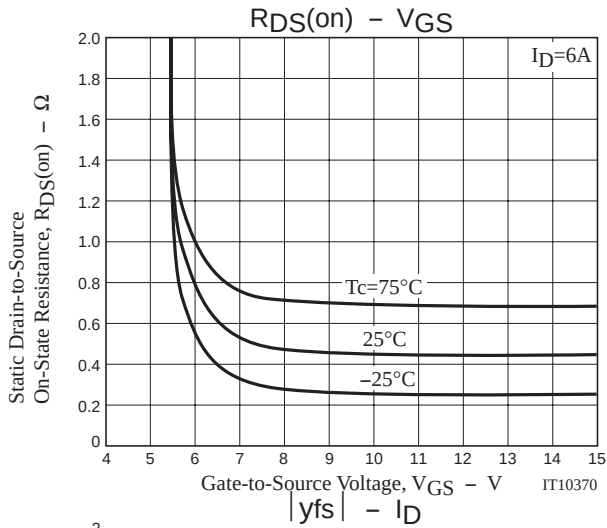
Package Dimensions

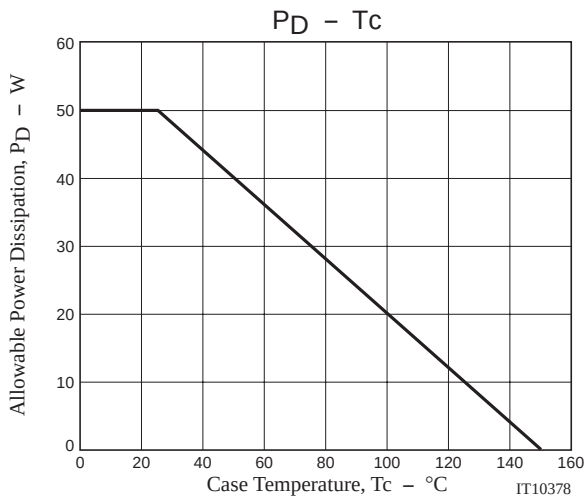
unit : mm
7002-001



Switching Time Test Circuit







Note on usage : Since the 2SK3284 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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