



SANYO Semiconductors

DATA SHEET

2SK3094 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- High-speed switching.
- Low ON-resistance.
- 15V drive.

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		5.5	A
Drain Current (Pulse)	I _{DP}		22	A
Allowable Power Dissipation	P _D	T _c =25°C	55	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	3.0		4.0	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =2.8A	1.3	2.6		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =2.8A, V _{GS} =15V		0.92	1.2	Ω
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		660		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		170		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		80		pF

Continued on next page.

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2SK3094

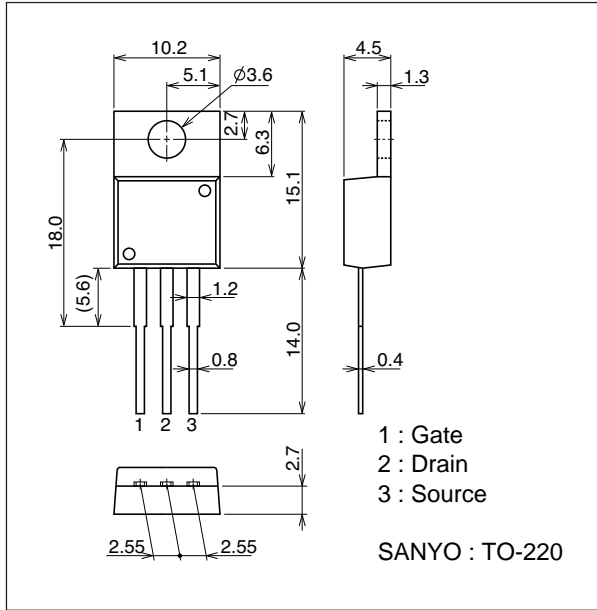
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	Qg	V _{DS} =200V, I _D =5.5A, V _{GS} =10V		20		nC
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		14		ns
Rise Time	t _r	See specified Test Circuit.		15		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		45		ns
Fall Time	t _f	See specified Test Circuit.		25		ns
Diode Forward Voltage	V _{SD}	I _S =5.5A, V _{GS} =0V			1.2	V

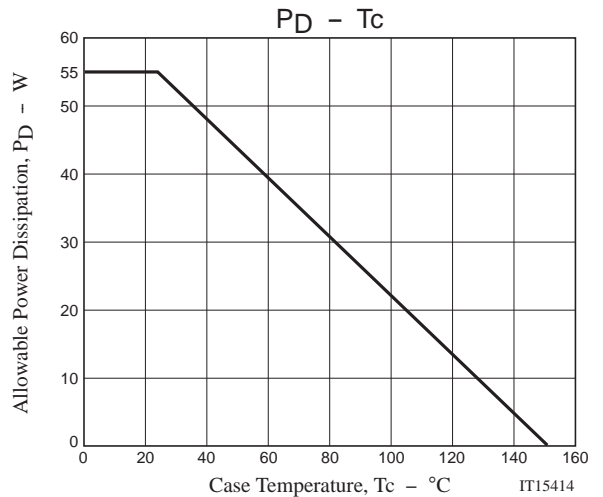
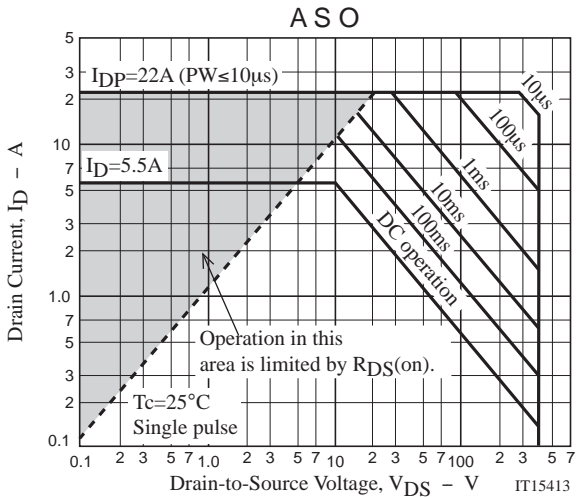
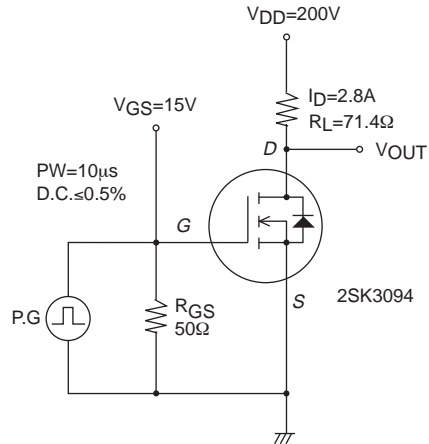
Package Dimensions

unit : mm (typ)

7507-002



Switching Time Test Circuit



Note on usage : Since the 2SK3094 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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