



SANYO Semiconductors

**DATA SHEET**

# 2SK3491 — N-Channel Silicon MOSFET

## General-Purpose Switching Device Applications

**Features**

- Low ON-resistance.
- Low Qg.

**Specifications****Absolute Maximum Ratings** at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		600	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±30	V
Drain Current (DC)	I <sub>D</sub>		1.0	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	4.0	A
Allowable Power Dissipation	P <sub>D</sub>		1.0	W
		Tc=25°C	20	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-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) <sub>DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0V	600			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>D</sub> =600V, V <sub>GS</sub> =0V			100	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±30V, V <sub>D</sub> =0V			±100	nA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>D</sub> =10V, I <sub>D</sub> =1mA	2.5		3.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>D</sub> =10V, I <sub>D</sub> =0.5A	430	850		mS
Static Drain-to-Source On-State Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =0.5A		8.5	11	Ω
Input Capacitance	C <sub>iss</sub>	V <sub>D</sub> =20V, f=1MHz		135		pF
Output Capacitance	C <sub>oss</sub>	V <sub>D</sub> =20V, f=1MHz		40		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>D</sub> =20V, f=1MHz		20		pF

Marking : K3491

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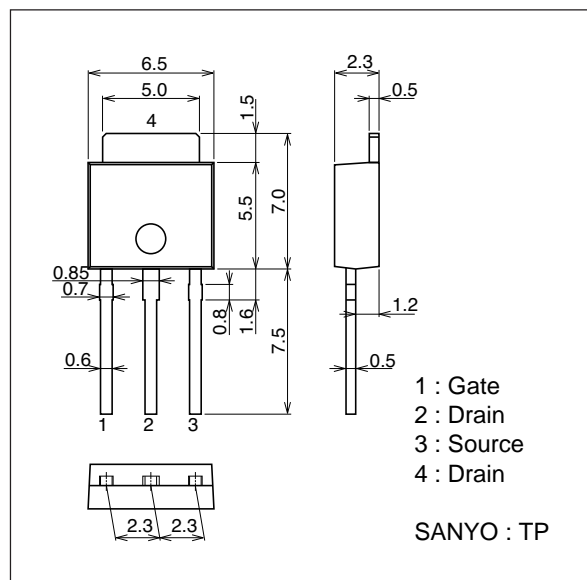
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Total Gate Charge	$Q_g$	$V_{DS}=200V$ , $V_{GS}=10V$ , $I_D=1.0A$		6		nC
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		8		ns
Rise Time	$t_r$	See specified Test Circuit.		7		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		17		ns
Fall Time	$t_f$	See specified Test Circuit.		30		ns
Diode Forward Voltage	$V_{SD}$	$I_S=1.0A$ , $V_{GS}=0V$		0.83	1.2	V

**Package Dimensions**

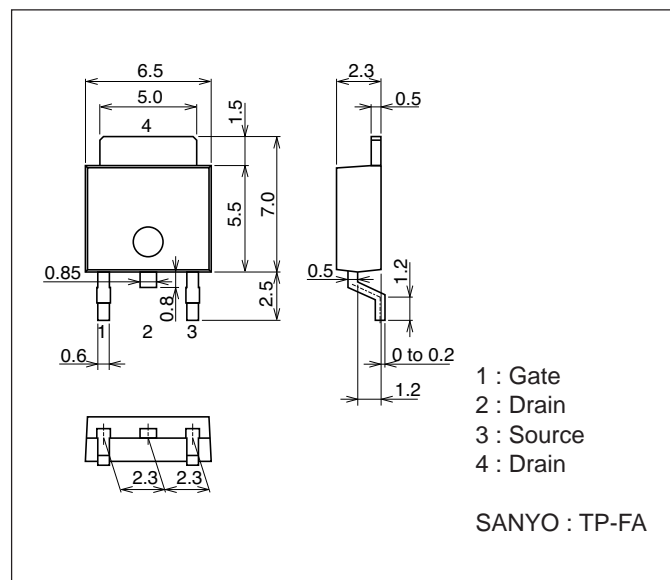
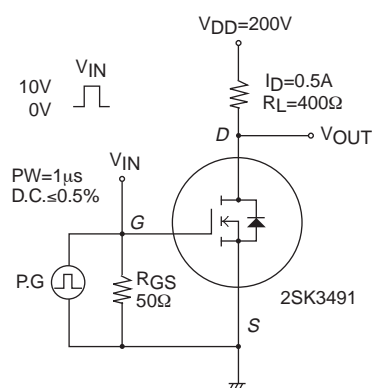
unit : mm (typ)

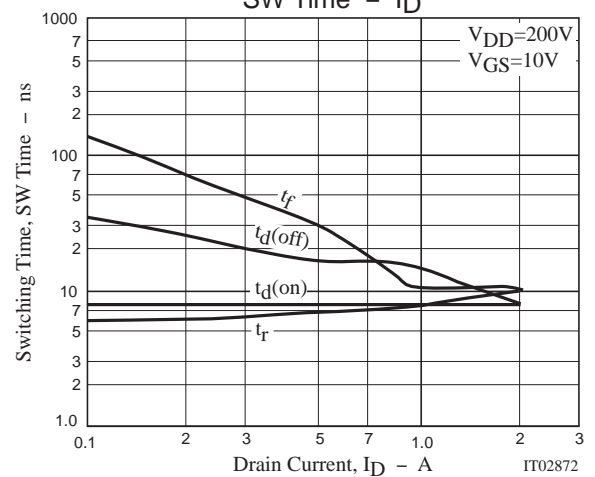
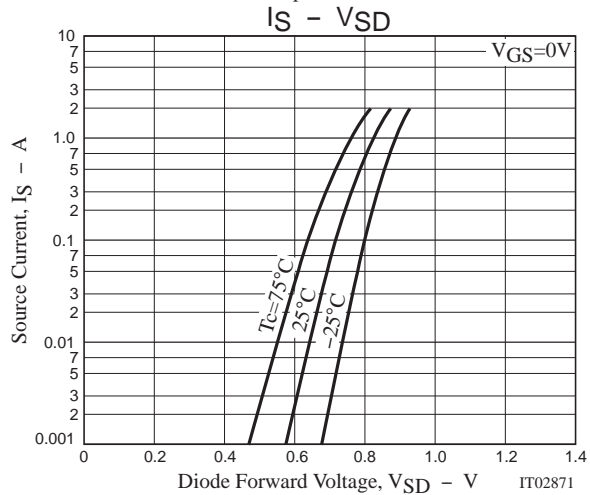
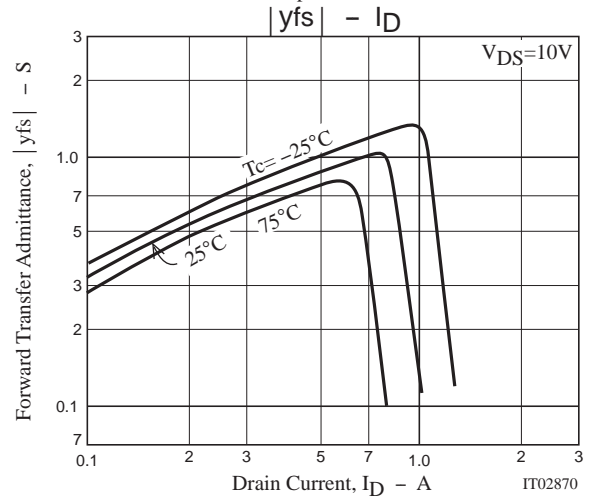
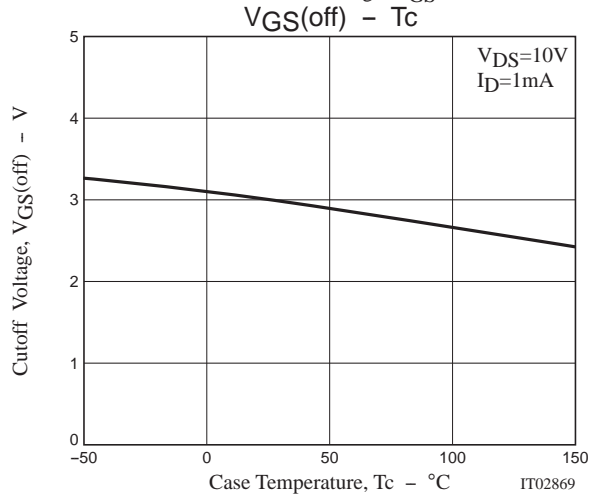
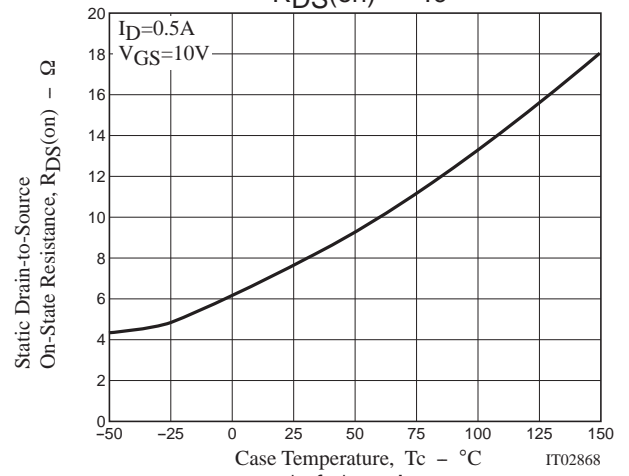
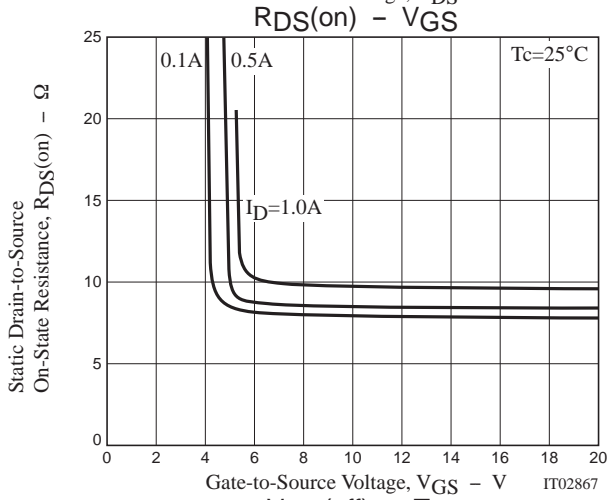
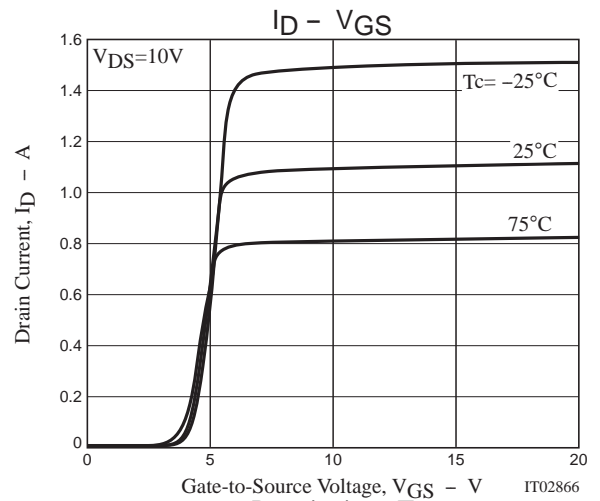
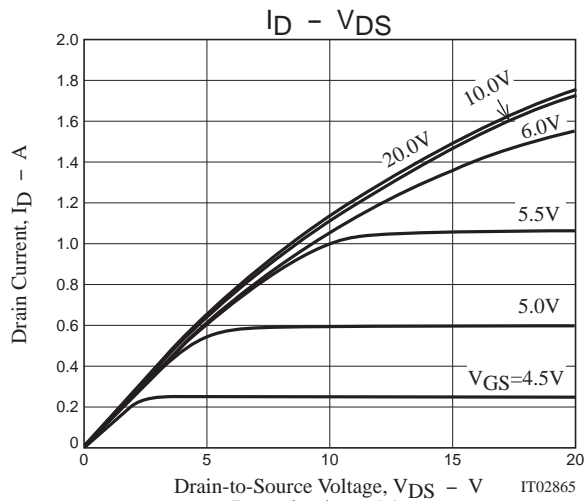
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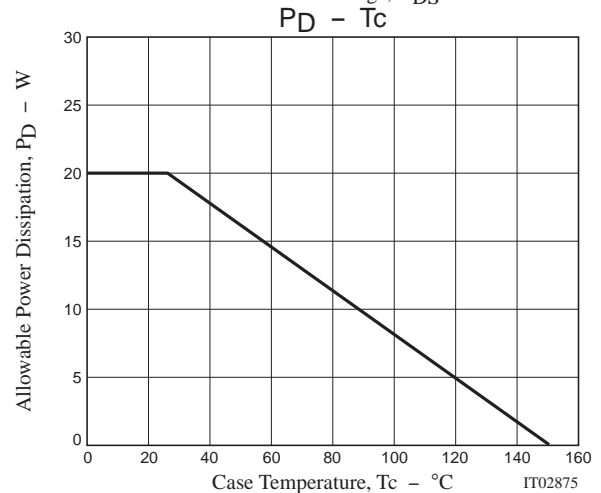
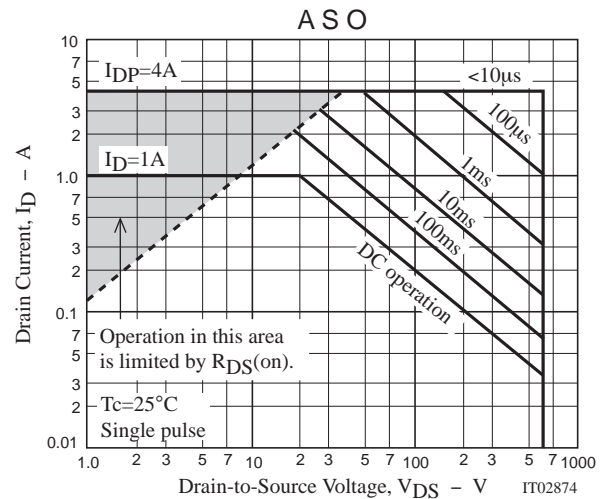
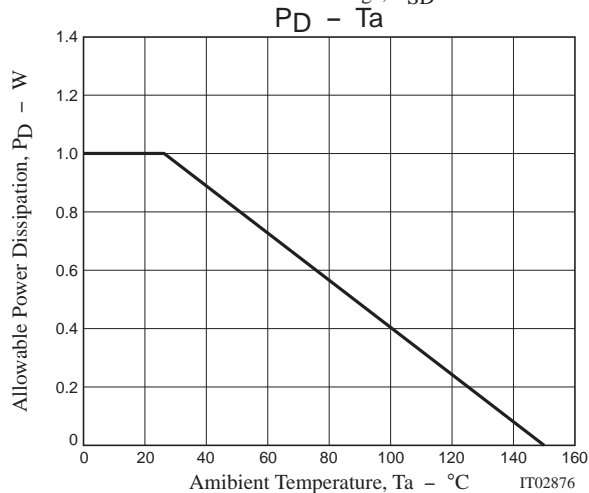
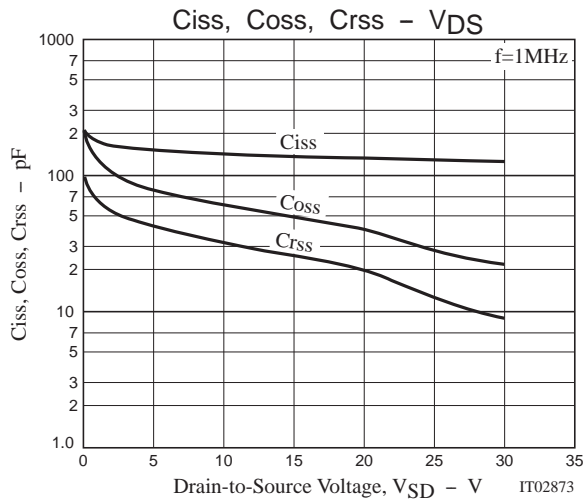
**Package Dimensions**

unit : mm (typ)

7003-004

**Switching Time Test Circuit**





Note on usage : Since the 2SK3491 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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