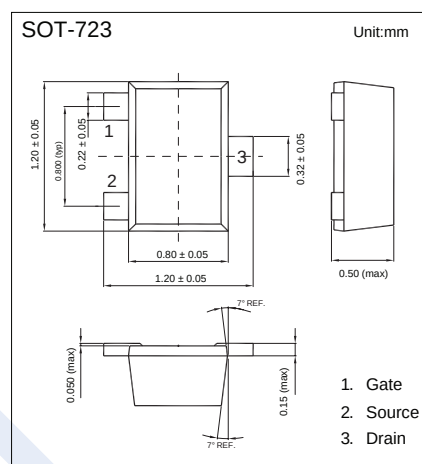
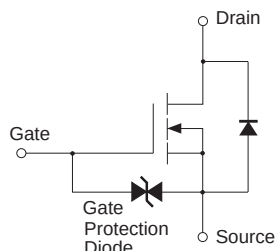


N-Channel MOSFET

2KK5099

■ Features

- Low on-resistance.
- Fast switching speed.
- Low voltage drive (2.5V) makes this device ideal for portable equipment.
- Easily designed drive circuits.
- Easy to parallel.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current	I _D	±100	mA
Continuous Drain Current Pulsed *1	I _{DP}	±400	
Power Dissipation *2	P _D	150	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

*1 P_w ≤ 10μs, Duty cycle ≤ 1%

*2 With each pin mounted on the recommended lands.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =100μA, V _{GS} =0V	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±1	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =100μA	0.8		1.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =4V, I _D =10mA		5	8	Ω
		V _{GS} =2.5V, I _D =1mA		7	13	
Forward Transfer admittance	Y _{fs}	V _{DS} =3V, I _D =10mA	20			mS
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =5V, f=1MHz		13		pF
Output Capacitance	C _{oss}			9		
Reverse Transfer Capacitance	C _{rss}			4		
Turn-On DelayTime	t _{d(on)}	V _{GS} =5V, V _{DS} =5V, R _L =500Ω, R _{GEN} =10Ω I _D =10mA		15		ns
Turn-On Rise Time	t _r			35		
Turn-Off DelayTime	t _{d(off)}			80		
Turn-Off Fall Time	t _f			80		

■ Marking

Marking	KN
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N-Channel MOSFET

2KK5099

■ Typical Characteristics

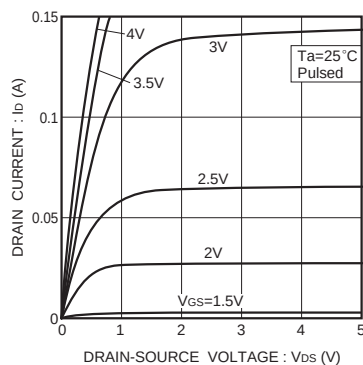


Fig.1 Typical output characteristics

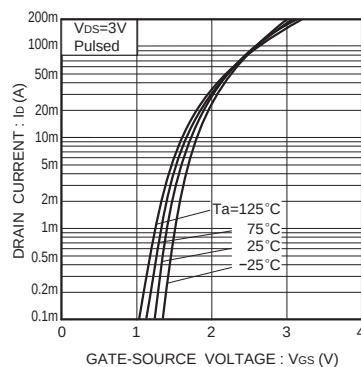


Fig.2 Typical transfer characteristics

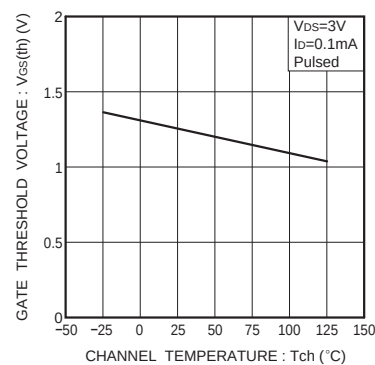


Fig.3 Gate threshold voltage vs. channel temperature

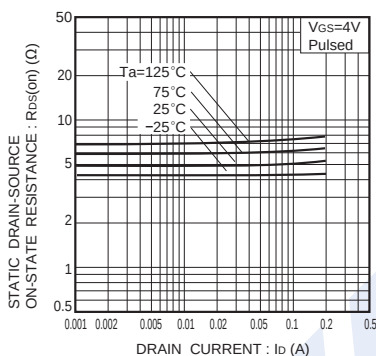


Fig.4 Static drain-source on-state resistance vs. drain current (I)

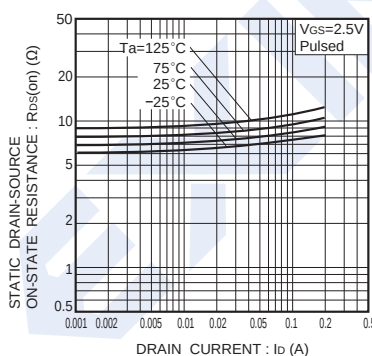


Fig.5 Static drain-source on-state resistance vs. drain current (II)

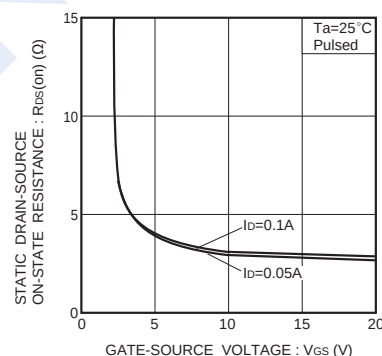


Fig.6 Static drain-source on-state resistance vs. gate-source voltage

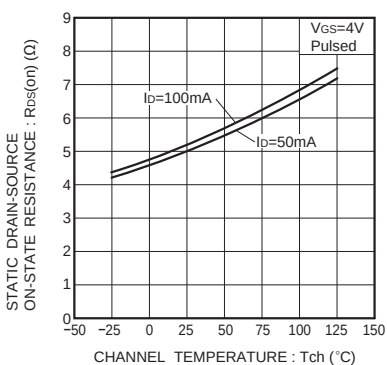


Fig.7 Static drain-source on-state resistance vs. channel temperature

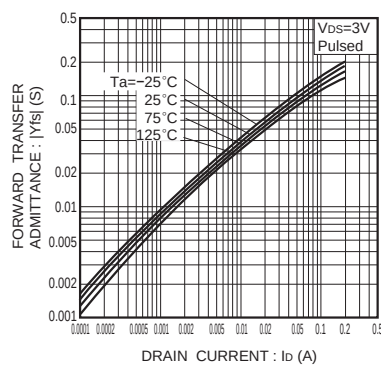


Fig.8 Forward transfer admittance vs. drain current

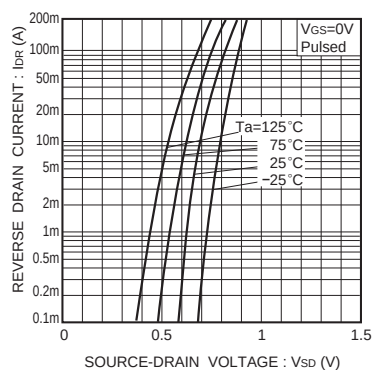


Fig.9 Reverse drain current vs. source-drain voltage (I)

N-Channel MOSFET

2KK5099

■ Typical Characteristics

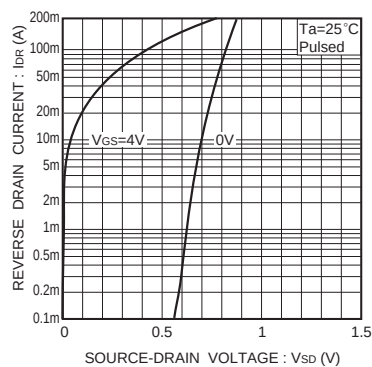


Fig.10 Reverse drain current vs. source-drain voltage (II)

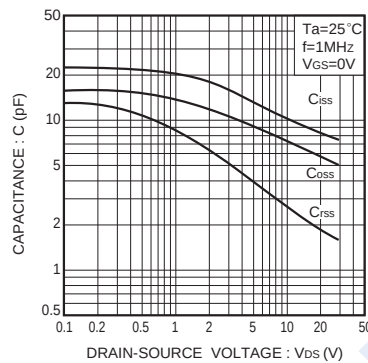


Fig.11 Typical capacitance vs. drain-source voltage

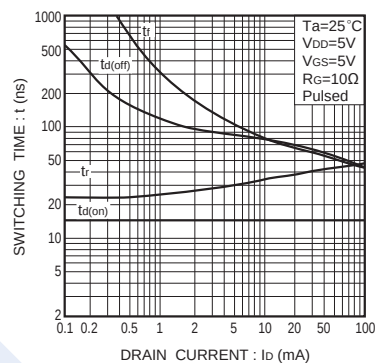


Fig.12 Switching characteristics