

# SOT-723 Plastic-Encapsulate MOSFETS

N-Channel MOSFET

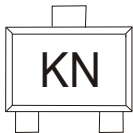
## FEATURES

- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for portable equipment
- Drive circuits can be simple
- Parallel use is easy

## APPLICATIONS

Interfacing , Switching

## MARKING:KN



### Pb-Free package is available

RoHS product for packing code suffix "G"

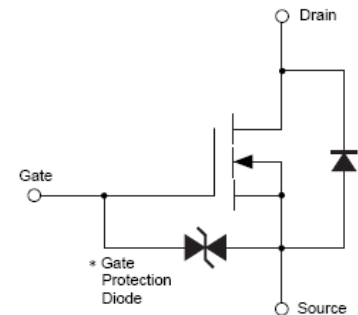
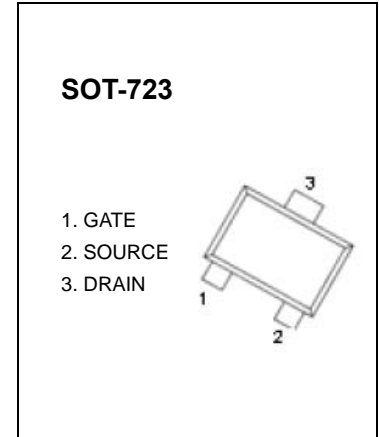
Halogen free product for packing code suffix "H"

\*A protection diode is included between the gate and the source terminals to protect the diode against static electricity when the product is in use. Use a protection circuit when the fixed voltages are exceeded.

### Maximum ratings (T<sub>a</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Drain-source voltage	V <sub>DS</sub>	30	V
Gate-source voltage	V <sub>GS</sub>	±20	
Continuous drain current	I <sub>D</sub>	±100	mA
Power dissipation	P <sub>D</sub>	0.15	W
Thermal resistance from junction to ambient	R <sub>θJA</sub>	833	°C/W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 ~+150	

\* Pw≤10μs ,Duty cycles≤1%



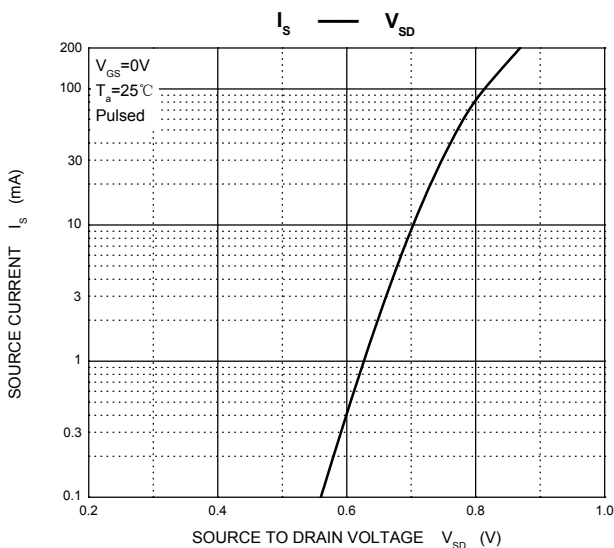
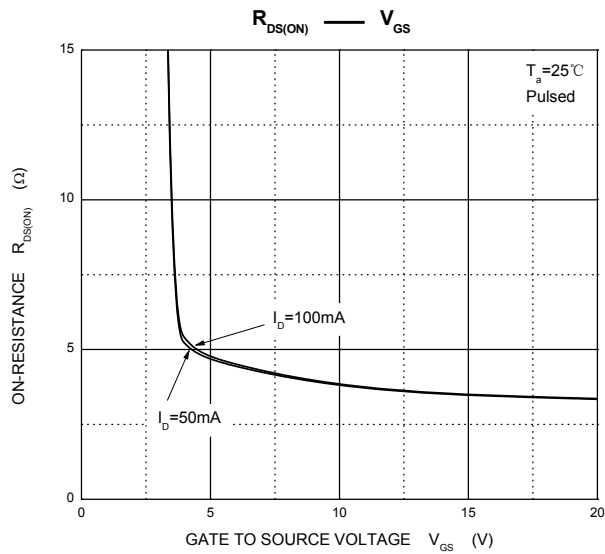
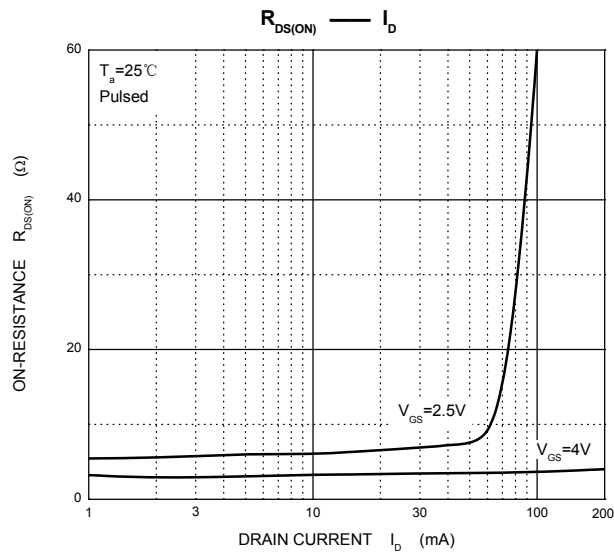
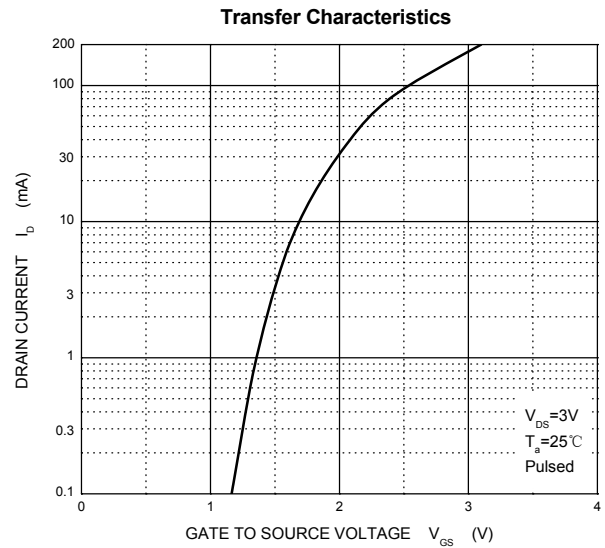
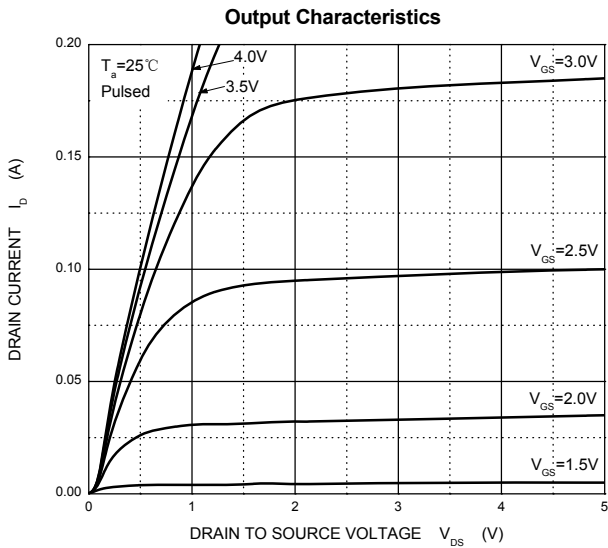
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### Electrical characteristics ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 10\mu A$	30			V
Gate-source leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 1$	$\mu A$
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 30V, V_{GS} = 0V$			1.0	$\mu A$
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = 3V, I_D = 100\mu A$	0.8		1.5	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = 4V, I_D = 10mA$		5	8	$\Omega$
		$V_{GS} = 2.5V, I_D = 1mA$		7	13	
Forward transconductance	$g_{FS}$	$V_{DS} = 3V, I_D = 10mA$	20			mS
Input capacitance	$C_{iss}$	$V_{DS} = 5V, V_{GS} = 0V, f = 1MHz$		13		$\mu F$
Output capacitance	$C_{oss}$			9		
Reverse transfer capacitance	$C_{rss}$			4		
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 5V, V_{DD} = 5V, I_D = 10mA$ $R_L = 500\Omega, R_G = 10\Omega$		15		ns
Rise time	$t_r$			35		
Turn-off delay time	$t_{d(off)}$			80		
Fall time	$t_f$			80		

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**Typical Characteristics**

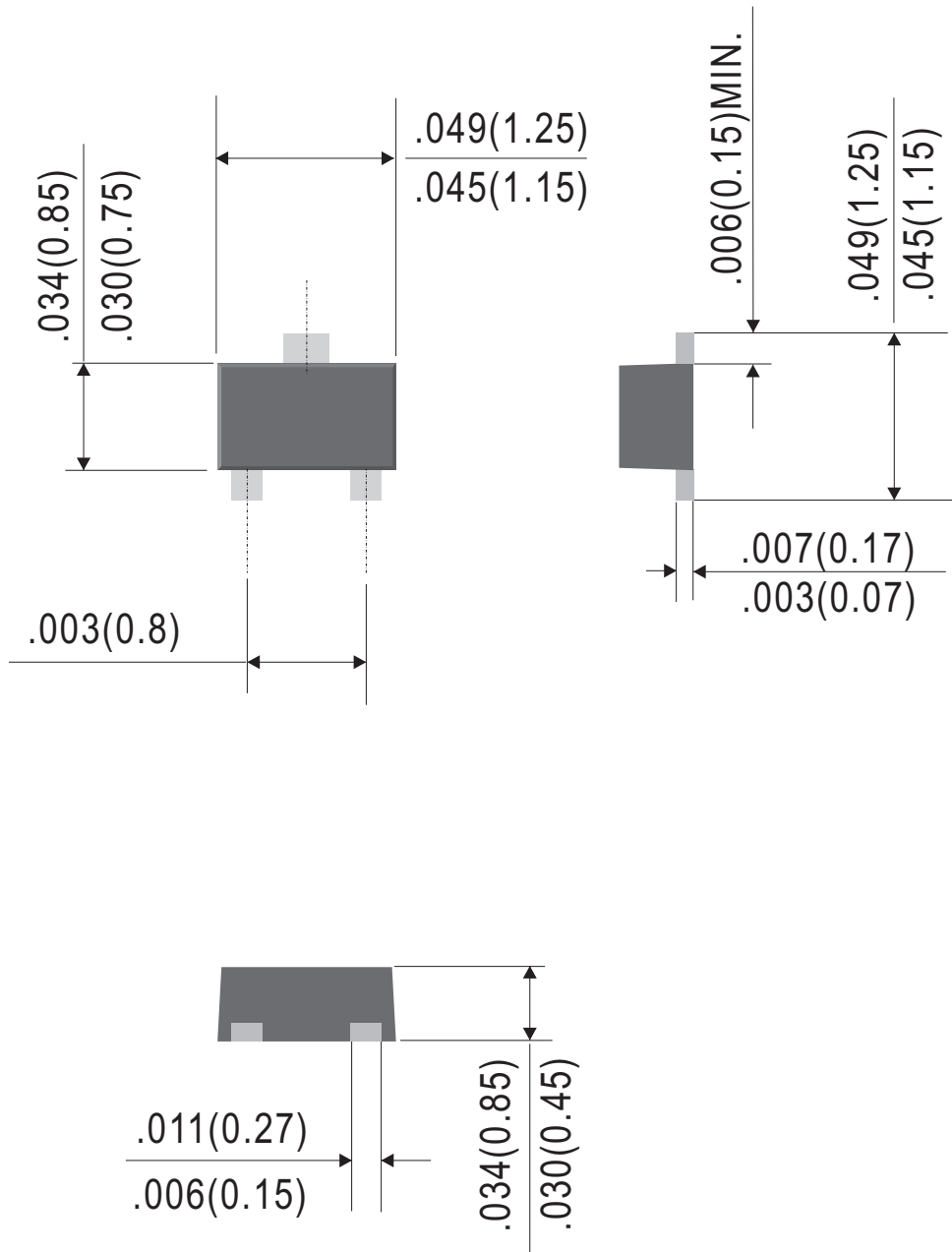




## SOT-723 Plastic-Encapsulate MOSFETS

### Outline Drawing

### SOT-723



Dimensions in inches and (millimeters)

Rev.C