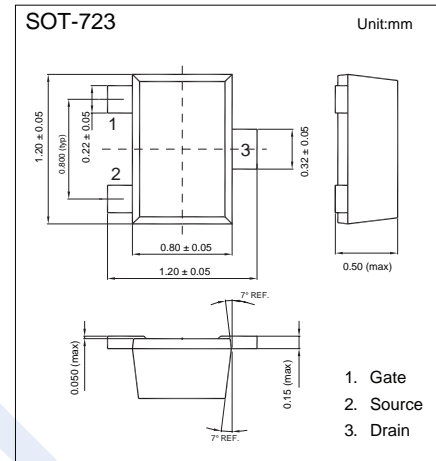
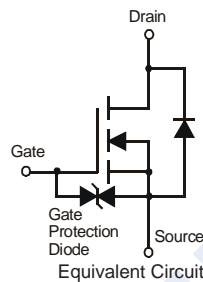


N-Channel MOSFET

2KK5777

■ Features

- $BV_{DSS} = 30\text{ V}$
- $I_D = 100\text{ mA}$
- $R_{DS(ON)} < 8\ \Omega$ @ $V_{GS} = 4\text{ V}$
- $R_{DS(ON)} < 13\ \Omega$ @ $V_{GS} = 2.5\text{ V}$
- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device idea for portable equipment
- Drive circuits can be simple
- Parallel use is easy
- Marking: KN

■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	100	mA
Power Dissipation	P_D	0.15	W
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D = 10\ \mu\text{A}$, $V_{GS} = 0\text{V}$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30\text{ V}$, $V_{GS} = 0\text{ V}$			1	μA
Gate to Source Leakage Current	I_{GSS}	$V_{DS} = 0\text{ V}$, $V_{GS} = \pm 20\text{ V}$			± 2	
Gate to Source Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\ \mu\text{A}$	0.8		1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS} = 4\text{ V}$, $I_D = 10\text{ mA}$		5	8	Ω
		$V_{GS} = 2.5\text{ V}$, $I_D = 1\text{ mA}$		7	13	
Forward transconductance	g_{FS}	$V_{DS} = 3\text{V}$, $I_D = 10\text{mA}$	20			mS
Input Capacitance	C_{iss}	$V_{GS} = 0\text{ V}$, $V_{DS} = 5\text{ V}$, $f = 1\text{ MHz}$		13		pF
Output Capacitance	C_{oss}			9		
Reverse Transfer Capacitance	C_{rss}			4		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS} = 5\text{V}$, $V_{DD} = 5\text{V}$, $I_D = 10\text{ mA}$, $R_L = 500\ \Omega$, $R_G = 10\ \Omega$		15		ns
Turn-On Rise Time	t_r			35		
Turn-Off Delay Time	$t_{d(off)}$			80		
Turn-Off Fall Time	t_f			80		

2KK5777

Typical Characteristics

