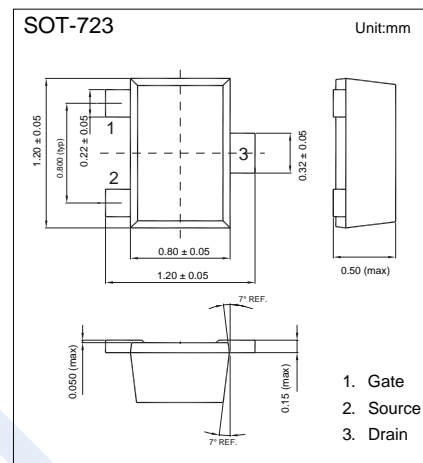
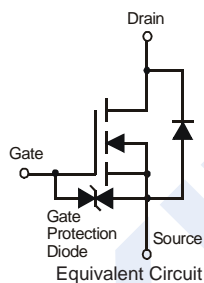


## N-Channel MOSFET

## 2KK5776

## ■ Features

- $BV_{DSS} = 20\text{ V}$
- $I_D = 750\text{ mA}$
- $R_{DS(ON)} < 380\text{ m}\Omega$  @  $V_{GS} = 4.5\text{ V}$
- $R_{DS(ON)} < 450\text{ m}\Omega$  @  $V_{GS} = 2.5\text{ V}$
- $R_{DS(ON)} < 800\text{ m}\Omega$  @  $V_{GS} = 1.8\text{ V}$

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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	20	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	
Continuous Drain Current (Note 1)	$I_D$	0.75	A
Pulsed Drain Current ( $t_p=10\mu\text{s}$ )	$I_{DM}$	1.8	
Power Dissipation	$P_D$	0.15	W
Thermal Resistance, Junction- to-Ambient (Note 1)	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	
Lead Temperature for Soldering Purposes (1/8" from case for 10 s)	$T_L$	260	

Note 1. Surface mounted on FR4 board using the minimum recommended pad size.

## 2KK5776

## ■ Electrical Characteristics (Ta = 25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>STATIC CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	I <sub>D</sub> = 250 μA, V <sub>GS</sub> = 0V	20			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 20 V, V <sub>GS</sub> = 0 V			1	μA
Gate to Source Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±10 V			±20	
Gate to Source Threshold Voltage (Note 2)	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA	0.35	0.54	1.1	V
Static Drain-Source On-Resistance (Note 2)	R <sub>DS(on)</sub>	V <sub>GS</sub> = 4.5 V, I <sub>D</sub> = 0.65A		270	380	mΩ
		V <sub>GS</sub> = 2.5 V, I <sub>D</sub> = 0.55 A		320	450	
		V <sub>GS</sub> = 1.8 V, I <sub>D</sub> = 0.45 A		390	800	
Forward transconductance (Note 2)	g <sub>FS</sub>	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 0.8 A		1.6		S
Diode forward voltage	V <sub>SD</sub>	I <sub>S</sub> = 0.15 A, V <sub>GS</sub> = 0V			1.2	V
<b>DYNAMIC CHARACTERISTICS (Note 4)</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> = 0 V, V <sub>DS</sub> = 16 V, f = 1 MHz		79	120	pF
Output Capacitance	C <sub>oss</sub>			13	20	
Reverse Transfer Capacitance	C <sub>rss</sub>			9	15	
<b>SWITCHING CHARACTERISTICS (Note 3,4)</b>						
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>GS</sub> = 4.5V, V <sub>DS</sub> = 10V, I <sub>D</sub> = 500m A, R <sub>GEN</sub> = 10Ω		6.7		ns
Turn-On Rise Time	t <sub>r</sub>			4.8		
Turn-Off DelayTime	t <sub>d(off)</sub>			17.3		
Turn-Off Fall Time	t <sub>f</sub>			7.4		

Notes:

- Pulse Test : Pulse Width=300μs, Duty Cycle=2%.
- Switching characteristics are independent of operating junction temperatures.
- Guaranteed by design, not subject to producing.

## ■ Marking

Marking	KF
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2KK5776

■ Typical Characteristics

