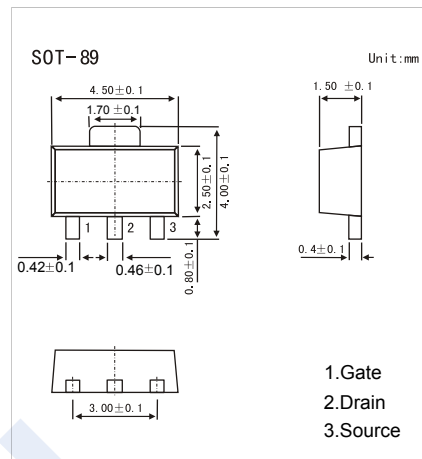
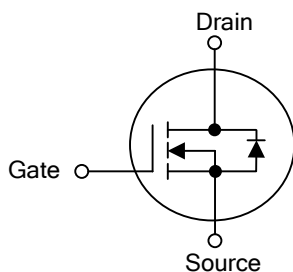


N-Channel MOSFET

UTM2054 (KTM2054)

■ Features

- $V_{DS} (V) = 20V$
- $I_D = 5 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 40m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 54m\Omega$ ($V_{GS} = 4.5V$)
- $R_{DS(ON)} < 130m\Omega$ ($V_{GS} = 2.5V$)
- Fast switching capability



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 16	
Continuous Drain Current	I_D	5	A
Pulsed Drain Current	I_{DM}	20	
Power Dissipation	P_D	1.47	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

N-Channel MOSFET

UTM2054 (KTM2054)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =16V, V _{GS} =0V			1	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±16V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	0.6		1.5	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =5A (Note.1)			40	mΩ
		V _{GS} =4.5V, I _D =3.5A (Note.1)			54	
		V _{GS} =2.5V, I _D =2.5A (Note.1)			130	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz		450		pF
Output Capacitance	C _{oss}			100		
Reverse Transfer Capacitance	C _{rss}			60		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		2.5		Ω
Total Gate Charge	Q _g	V _{GS} =4.5V, V _{DS} =10V, I _D =5A		11.5	15	nC
Gate Source Charge	Q _{gs}			3.8		
Gate Drain Charge	Q _{gd}			5.2		
Turn-On DelayTime	t _{d(on)}	V _{DD} =10V, R _L =10Ω, I _{DS} =1A, V _{GEN} =4.5V, R _G =6Ω			10	ns
Turn-On Rise Time	t _r				25	
Turn-Off DelayTime	t _{d(off)}				26	
Turn-Off Fall Time	t _f				7	
Diode Forward Voltage	V _{SD}	I _S =3A, V _{GS} =0V (Note.1)			1.3	V

Note.1: Pulse width ≤ 300μs, Duty cycle ≤ 2%

■ Marking

Marking	AB3
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