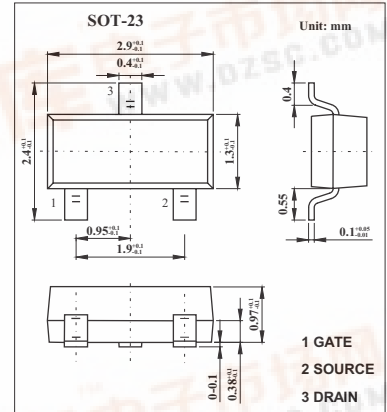


SMD Type MOSFET

MOS Field Effect Transistor
2SK1657

■ Features

- Directly driven by ICs having a 3V power supply.
 - Has low gate leakage current
- $I_{GSS} = \pm 5nA \text{ MAX. @ } V_{GS} = \pm 3.0V$



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	30	V
Gate to source voltage	V_{GSS}	± 7	V
Drain current (DC)	I_D	± 100	mA
Drain current(pulse) *	I_D	± 200	mA
Power dissipation	P_D	200	m W
Channel temperature	T_{ch}	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* $PW \leq 10ms$, duty cycle $\leq 5\%$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS}=30V, V_{GS}=0$			1.0	μA
Gate leakage current	I_{GSS}	$V_{GS} = \pm 3.0V, V_{DS}=0$			± 5.0	nA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS}=3.0V, I_D=1 \mu A$	0.9	1.2	1.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=3.0V, I_D=10mA$	20	40		ms
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS}=2.5V, I_D=10mA$		25	45	Ω
		$V_{GS}=4.0V, I_D=10mA$		18	25	Ω
Input capacitance	C_{iss}	$V_{DS}=3.0V, V_{GS}=0, f=1MHz$		15		pF
Output capacitance	C_{oss}			10		pF
Reverse transfer capacitance	C_{rss}			1.5		pF
Turn-on delay time	$t_{d(on)}$				95	
Rise time	t_r	$I_D=10mA, V_{GS(on)}=3V, R_L=300 \Omega, V_{DD}=3.0V, R_G=10 \Omega$		360		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	t_f			150		ns

■ Marking

Marking	G19
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