TY Semicondutor® TY

2SK2159

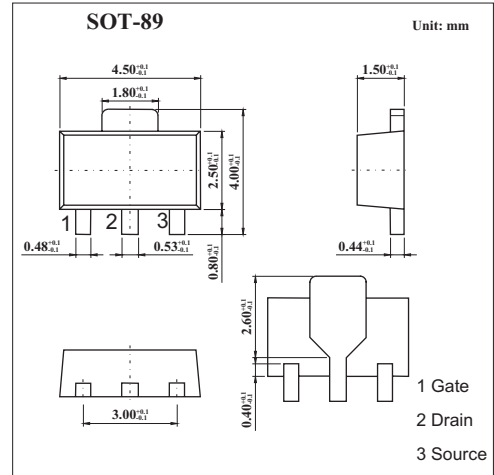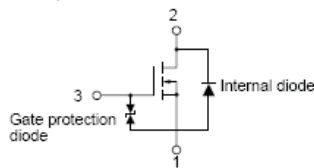**SOT-89**   Unit: mm

1 Gate
2 Drain
3 Source

■ Features

● Capable of drive gate with 1.5 V

● Small $R_{DS(on)}$

　$R_{DS(on)}$ = 0.7 Ω MAX. @V_{GS} = 1.5 V, I_D = 0.1 A

　$R_{DS(on)}$ = 0.3 Ω MAX. @V_{GS} = 4.0 V, I_D = 1.0 A

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	±14	V
Drain current	I_D	±2.0	A
	I_{dp} *	±4.0	A
Power dissipation	P_D	2.0	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

　* PW≤10ms,Duty Cycle≤50%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=60V,V_{GS}=0			1.0	μA
Gate leakage current	I_{GSS}	V_{GS}=±14V,V_{DS}=0			±10	μA
Gate to source cutoff voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	0.5	0.9	1.1	V
Forward transfer admittance	｜Y_{fs}｜	V_{DS}=10V,I_D=1.0A	0.4			S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=1.5V,I_D=0.1A		0.55	0.7	Ω
		V_{GS}=2.5V,I_D=1.0A		0.27	0.5	Ω
		V_{GS}=4.0V,I_D=1.0A		0.22	0.3	Ω
Input capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		319		pF
Output capacitance	C_{oss}			109		pF
Reverse transfer capacitance	C_{rss}			22		pF
Turn-on delay time	$t_{d(on)}$	I_D=1.0A,$V_{GS(on)}$=3V,R_L=25Ω,R_G=10Ω,V_{DD}=25V		38		ns
Rise time	tr			128		ns
Turn-off delay time	$t_{d(off)}$			237		ns
Fall time	tf			130		ns

■ Marking

Marking	NW