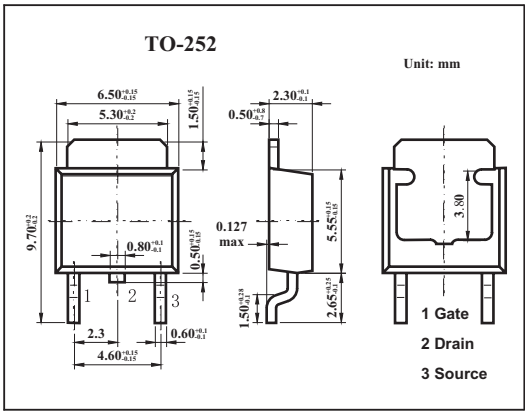
TY Semicondutor®

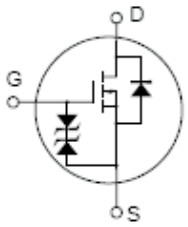
Product specification

2SK1254S

■ Features

- Low on-resistance
- High speed switching
- Suitable for switching regulator and DC-DC converter





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	120	V
Gate to source voltage	V_{GSS}	±20	V
Drain current (DC)	I_D	3	A
Drain current(pulse) *	I_D	12	A
Power dissipation	P_D	20	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤ 10μs, duty cycle ≤ 1%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain to source breakdown voltage	V_{DSS}	I_D=10mA,V_{GS}=0	120			V
Gate to source breakdown voltage	V_{GSS}	I_D=±100μA,V_{DS}=0	±20			V
Drain cut-off current	I_{DSS}	V_{DS}=100V,V_{GS}=0			100	μA
Gate leakage current	I_{GSS}	V_{GS}=±16V,V_{DS}=0			±10	μA
Gate to source cutoff voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	1.0		2.0	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=10V,I_D=2A	2.4	4.0		s
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=2A		0.30	0.40	Ω
		V_{GS}=4V,I_D=2A		0.35	0.55	Ω
Input capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		420		pF
Output capacitance	C_{oss}			190		pF
Reverse transfer capacitance	C_{rss}			25		pF
Turn-on delay time	$t_{d(on)}$	I_D=2A,$V_{GS(on)}$=10V,R_L=15Ω		5		ns
Rise time	t_r			20		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	t_f			45		ns