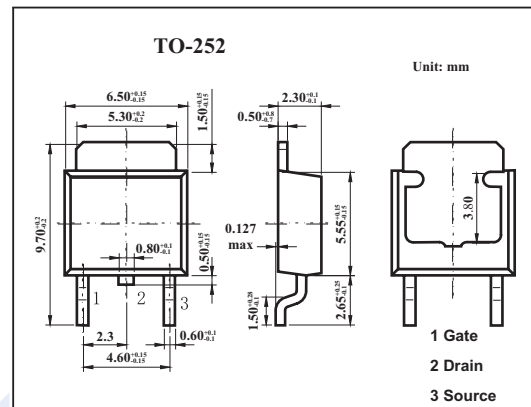
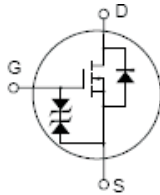


## Silicon N-Channel MOSFET 2SK2059S

### ■ Features

- Low on-resistance
- High speed switching
- No Secondary Breakdown
- Suitable for Switching regulator, DC - DC converter



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to source voltage	V <sub>DSS</sub>	600	V
Gate to source voltage	V <sub>GSS</sub>	±30	V
Drain current	I <sub>D</sub>	3	A
Power dissipation	P <sub>D</sub>	20	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I <sub>DSS</sub>	V <sub>Ds</sub> =500V, V <sub>Gs</sub> =0			100	μ A
Gate leakage current	I <sub>GSS</sub>	V <sub>Gs</sub> =±25V, V <sub>Ds</sub> =0			±10	μ A
Gate to source cutoff voltage	V <sub>Gs(off)</sub>	V <sub>Ds</sub> =10V, I <sub>D</sub> =1mA	2.0		3.0	V
Forward transfer admittance	Y <sub>fs</sub>	V <sub>Ds</sub> =10V, I <sub>D</sub> =10A	1.2	2.0		S
Drain to source on-state resistance	R <sub>Ds(on)</sub>	V <sub>Gs</sub> =10V, I <sub>D</sub> =1A		3.8	5.0	Ω
Input capacitance	C <sub>iss</sub>	V <sub>Ds</sub> =10V, V <sub>Gs</sub> =0, f=1MHZ		295		pF
Output capacitance	C <sub>oss</sub>			70		pF
Reverse transfer capacitance	C <sub>rss</sub>			12		pF
Turn-on delay time	t <sub>d(on)</sub>			8		ns
Rise time	t <sub>r</sub>	I <sub>D</sub> =1A, V <sub>Gs(on)</sub> =10V, R <sub>L</sub> =30 Ω		25		ns
Turn-off delay time	t <sub>d(off)</sub>			65		ns
Fall time	t <sub>f</sub>			30		ns