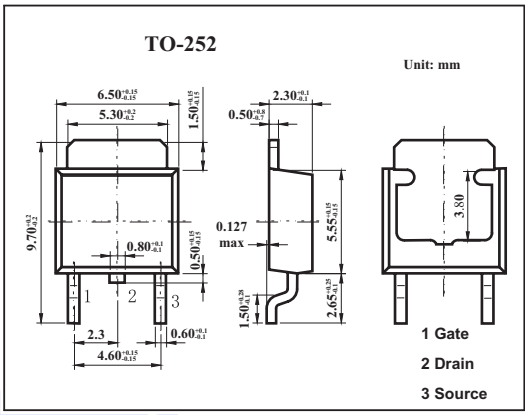
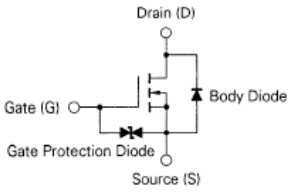
MOS Field Effect Power Transistor

2SK1954

■ Features

- Low on-resistance
  $R_{DS(on)}$=0.65Ω (V_{GS}=10V,I_D=2A)
- Low Ciss Ciss=300pF typ
- Built-in G-S Gate Protection Diode
- High Avalanche Capability Ratings





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	180	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	±4.0	A
Power dissipation	P_D	20	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	V_{DS}=180V,V_{GS}=0			100	μA
Gate leakage current	I_{GSS}	V_{GS}=±20V,V_{DS}=0			±10	μA
Gate to Source Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	2.0		4.0	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=10V,I_D=2.0A	0.5			S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=2.0A		0.52	0.65	Ω
Input capacitance	Ciss	V_{DS}=10V,V_{GS}=0,f=1MHZ		300		pF
Output capacitance	Coss			170		pF
Reverse transfer capacitance	Crss			50		pF
Turn-on delay time	$t_{d(on)}$	I_D=2A,$V_{GS(on)}$=10V,R_L=50Ω		9		ns
Rise time	tr			12		ns
Turn-off delay time	$t_{d(off)}$			28		ns
Fall time	tf			12		ns