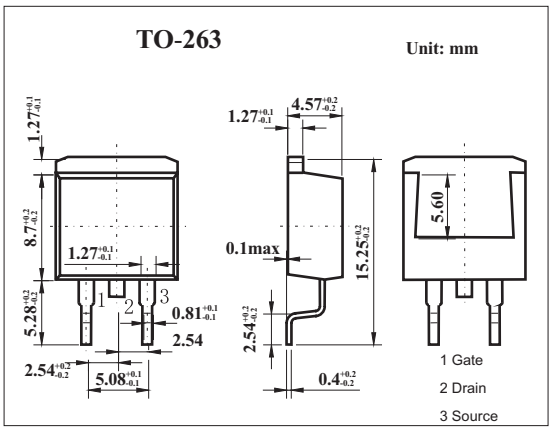
MOS Field Effect Transistor
2SK3902



■ Features

- Low On-state resistance

  $R_{DS(on)1}$ = 21mΩ MAX. (V_{GS} = 10 V, I_D = 15A)

  $R_{DS(on)2}$ = 26 mΩ MAX. (V_{GS} = 4.5 V, I_D = 15A)

- Low C iss: C iss =1200 pF TYP.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	60	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	±30	A
	I_{dp} *	±90	A
Power dissipation T_A=25℃	P_D	1.5	W
T_C=25℃		45	
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 cut-off current	I_{DSS}	V_{DS}=60V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±20V,V_{DS}=0			±10	μA
Gate cut off voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	1.5	2.0	2.5	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS}=10V,I_D=15A	9.5	19		S
Drain to source on-state resistance	$R_{DS(on)1}$	V_{GS}=10V,I_D=15A		16.8	21	mΩ
	$R_{DS(on)2}$	V_{GS}=4.5V,I_D=15A		19.5	26	mΩ
Input capacitance	Ciss	V_{DS}=10V,V_{GS}=0,f=1MHZ		1200		pF
Output capacitance	Coss			250		pF
Reverse transfer capacitance	Crss			85		pF
Turn-on delay time	ton	I_D=15A,$V_{GS(on)}$=10V,R_G=0Ω,V_{DD}=30V		10		ns
Rise time	tr			4		ns
Turn-off delay time	toff			37		ns
Fall time	tf			4		ns
Total Gate Charge	Q_G	V_{DD} = 48V V_{GS} = 10 V I_D =30A		25		nC
Gate to Source Charge	Q_{GS}			4.5		nC
Gate to Drain Charge	Q_{GD}			6.0		nC