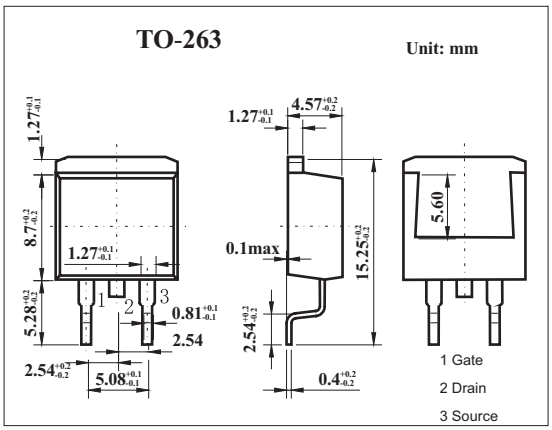
MOS Field Effect Transistor
2SK3510



Features

- Super low on-state resistance:
  $R_{DS(on)}$ = 8.5 mΩ MAX. (V_{GS} = 10 V, I_D = 42 A)
- Low Ciss: Ciss = 8500 pF TYP.
- Built-in gate protection diode

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	75	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	±83	A
	I_{dp} *	±332	A
Power dissipation Tc=25℃	P_D	125	W
Ta=25℃		1.5	
Channel temperature	Tch	150	℃
Storage temperature	Tstg	-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}=70V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±20V,V_{DS}=0			±1	μA
Gate cutoff voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	2.0	3.0	4.0	V
Forward transfer admittance	| Yfs |	V_{DS}=10V,I_D=42A	30	60		S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=10V,I_D=42A		6.5	8.5	mΩ
Input capacitance	Ciss	V_{DS}=10V,V_{GS}=0,f=1MHZ		8500		pF
Output capacitance	Coss			1300		pF
Reverse transfer capacitance	Crss			650		pF
Turn-on delay time	ton	I_D=42A,$V_{GS(on)}$=10V,R_L=10Ω,V_{DD}=38V		35		ns
Rise time	tr			28		ns
Turn-off delay time	toff			105		ns
Fall time	tf			16		ns
Total Gate Charge	Q_G	I_D =83A, V_{DD} =60V, V_{GS} = 10 V		150		nC
Gate to Source Charge	Q_{GS}			30		nC
Gate to Drain Charge	Q_{GD}			52		nC