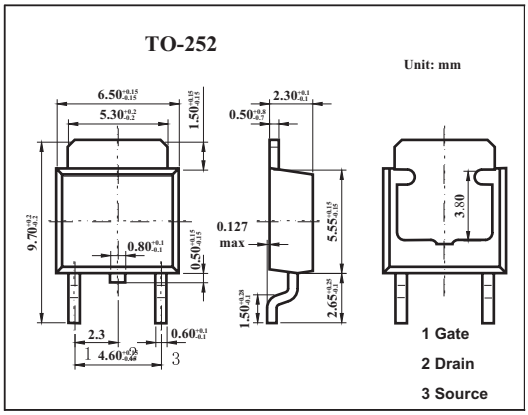
TY Semicondutor®

Product specification

2SK3919



■ Features

- Low on-state resistance

  $R_{DS(on)1}$ = 5.6 mΩ MAX. (V_{GS} = 10 V, I_D = 32 A)
- Low Ciss: Ciss = 2050 pF TYP.
- 5 V drive available

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	25	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	±64	A
	I_{dp} *	±256	A
Power dissipation T_A=25℃ T_C=25℃	P_D	1.0 36	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 cut-off current	I_{DSS}	V_{DS}=25V,V_{GS}=0			10	μA
Gate leakage current	I_{GSS}	V_{GS}=±20V,V_{DS}=0			±100	nA
Gate cut off voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=1mA	2.5	2.5	3.0	V
Forward transfer admittance	| Y_{fs} |	V_{DS}=10V,I_D=16A	9.7	19		S
Drain to source on-state resistance	$R_{DS(on)1}$	V_{GS}=10V,I_D=32A		4.5	5.6	mΩ
	$R_{DS(on)2}$	V_{GS}=5.0V,I_D=16A		6.8	13.7	mΩ
Input capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHZ		2050		pF
Output capacitance	C_{oss}			460		pF
Reverse transfer capacitance	C_{rss}			330		pF
Turn-on delay time	t_{on}	I_D=32A,$V_{GS(on)}$=10V,R_G=10Ω,V_{DD}=12.5V		16		ns
Rise time	t_r			19		ns
Turn-off delay time	t_{off}			53		ns
Fall time	tf			22		ns
Total Gate Charge	Q_G	V_{DD} = 20V V_{GS} = 10 V I_D =64A		42		nC
Gate to Source Charge	Q_{GS}			8		nC
Gate to Drain Charge	Q_{GD}			15		nC
Body Diode Forward Voltage	$V_{F(S-D)}$	I_F = 64A, V_{GS} = 0 V		0.97		V
Reverse Recovery Time	t_{rr}	I_F = 64 A, V_{GS} = 0 V		23		ns
Reverse Recovery Charge	Q_{rr}	di/dt = 100 A/ μs		11		nC