

SMD Type MOSFET

MOS Field Effect Transistor
2SK3919

Features

- Low on-state resistance
RDS(on)1 = 5.6 mΩ MAX. (VGS = 10 V, ID = 32 A)
- Low Ciss: Ciss = 2050 pF TYP.
- 5 V drive available

Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain to source voltage	Vbss	25	V
Gate to source voltage	Vgss	±20	V
Drain current	ID	±64	A
	Idp *	±256	A
Power dissipation	PD	TA=25°C	1.0
		Tc=25°C	36
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

* PW ≤ 10 μs, Duty Cycle ≤ 1%

Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	Idss	VDS=25V, VGS=0			10	μA
Gate leakage current	Igss	VGS=±20V, VDS=0			±100	nA
Gate cut off voltage	VGS(off)	VDS=10V, ID=1mA	2.5	2.5	3.0	V
Forward transfer admittance	Yfs	VDS=10V, ID=16A	9.7	19		S
Drain to source on-state resistance	RDS(on)1	VGS=10V, ID=32A		4.5	5.6	mΩ
	RDS(on)2	VGS=5.0V, ID=16A		6.8	13.7	mΩ
Input capacitance	Ciss			2050		pF
Output capacitance	Coss	VDS=10V, VGS=0, f=1MHZ		460		pF
Reverse transfer capacitance	Crss			330		pF
Turn-on delay time	ton			16		ns
Rise time	tr	ID=32A, VGS(on)=10V, RG=10 Ω, VDD=12.5V		19		ns
Turn-off delay time	toff			53		ns
Fall time	tf			22		ns
Total Gate Charge	QG	VDD = 20V		42		nC
Gate to Source Charge	QGS	VGS = 10 V		8		nC
Gate to Drain Charge	QGD	ID = 64A		15		nC
Body Diode Forward Voltage	VF(S-D)	IF = 64A, VGS = 0 V		0.97		V
Reverse Recovery Time	trr	IF = 64 A, VGS = 0 V		23		ns
Reverse Recovery Charge	Qrr	di/dt = 100 A/ μs		11		nC

