

2SK3559

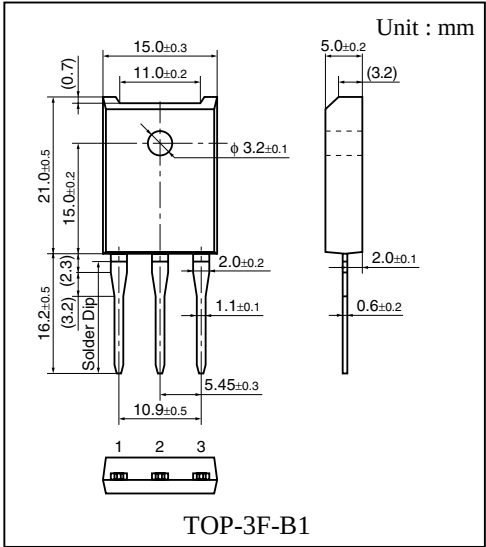
N-channel enhancement mode MOSFET

High speed switching

■ Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Drain-Source breakdown voltage		VDSS	230	V
Gate-Source voltage		VGSS	±30	V
Drain current	DC	ID	30	A
	Pulse	IDP	120	A
Allowable power dissipation	Tc = 25 °C *1	PD	100	W
	Ta = 25 °C *2	PD	3	W
Junction temperature		Tj	150	°C
Storage temperature		Tstg	-55 to +150	°C

*1 : Tc = 25 °C
*2 : Ta = 25 °C (Without heat sink)



■ Electrical Characteristics (Tc = 25 ± 3 °C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain Cutoff Current	IDSS	VDS = 184V, VGS = 0	—	—	100	μ A
Gate-source Leakage Current	IGSS	VGS = ± 30 V, VDS = 0	—	—	± 1	μ A
Drain-source Breakdown Voltage	VDSS	ID = 1 mA, VGS = 0	230	—	—	V
Gate Threshold Voltage	Vth	VDS = 25 V, ID = 1 mA	2	—	4	V
Drain-source on Resistance	RDS (on)	VGS = 10 V, ID = 15 A	—	55	74	m Ω
Forward Transfer Admittance	Yfs	VDS = 25 V, ID = 15 A	8	16	—	S
Diode Forward Voltage	VDSF	IDR = 30 A, VGS = 0	—	—	-1.5	V
Input Capacitance	Ciss	VDS = 25 V, VGS = 0, f = 1MHz	—	3170	—	p F
Output Capacitance	Coss		—	440	—	p F
Reverse Transfer Capacitance	Crss		—	35	—	p F
Turn-on delay time	td (on)	VDD = 100V, ID = 15 A	—	36	—	n s
Rise time	tr		—	25	—	n s
Turn-off delay time	td (off)	RL = 6.7 Ω, VGS = 10 V	—	217	—	n s
Fall time	tf		—	35	—	n s

