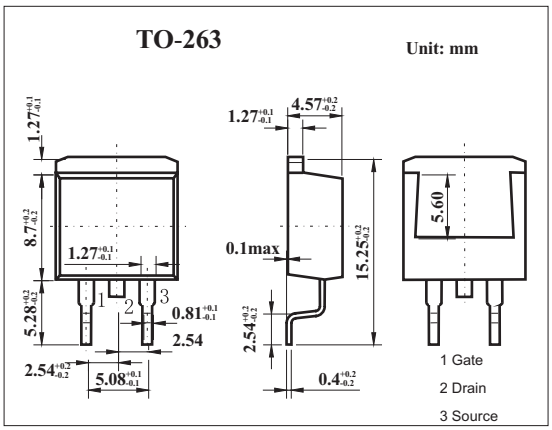
MOS Field Effect Transistor

2SJ606

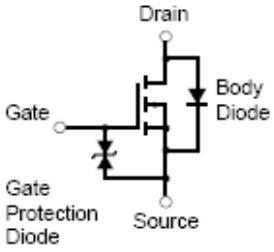


■ Features

- Low on-resistance

  $R_{DS(on)1}$ =15 mΩ MAX. (V_{GS} =-10 V, I_D = -42A)

  $R_{DS(on)2}$ = 23mΩ MAX. (V_{GS} = -4.0 V, I_D =-42 A)
- Low C_{iss}: C_{iss} = 4800 pF TYP.
- Built-in gate protection diode



■ 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 (DC)	I_D	±83	A
Drain current(pulse) *	I_D	±300	A
Power dissipation T_C=25℃	P_D	120	W
Power dissipation T_A=25℃	P_D	1.5	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW≤ 10μs, duty cycle ≤ 1 %

2SJ606

■ 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 to source cutoff 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=-42A	38	74		S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=-10V,I_D=-42A		12	15	mΩ
		V_{GS}=-4.0V,I_D=-42A		16	23	mΩ
Input capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0,f=1MHZ		4800		pF
Output capacitance	C_{oss}			1200		pF
Reverse transfer capacitance	C_{rss}			340		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS(on)}$=-30V,I_D=--42A ,V_{DD}=-10V,R_G=0Ω		13		ns
Rise time	t_r			13		ns
Turn-off delay time	$t_{d(off)}$			290		ns
Fall time	t_f			160		ns
Total Gate Charge	Q_G	I_D = -83A		120		nC
Gate to Source Charge	Q_{GS}	V_{DD}= -48 V		20		nC
Gate to Drain Charge	Q_{GD}	V_{GS} =-10 V		30		nC
Body Diode Forward Voltage	$V_{F(S-D)}$	I_F = 83A, V_{GS} = 0 V		1.1		V
Reverse Recovery Time	t_{rr}	I_F = 83 A, V_{GS} = 0 V		60		ns
Reverse Recovery Charge	Q_{rr}	di/dt = 100 A / μs		120		nC