MOS Field Effect Transistor
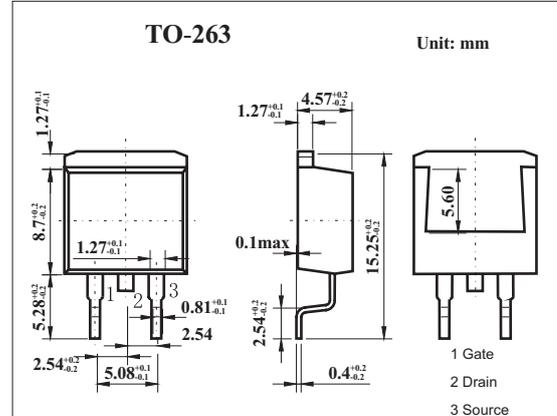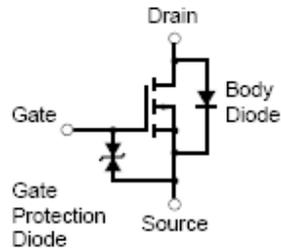# 2SJ603

■ Features

- Low on-resistance

    $R_{DS(on)1}$ = 48 mΩ MAX. (V_{GS} =-10 V, I_D = -13A)

    $R_{DS(on)2}$ = 75mΩ MAX. (V_{GS} = -4.0 V, I_D =-13 A)

- Low C_{iss}: C_{iss} = 1900 pF TYP.

- Built-in gate protection diode

TO-263   Unit: mm

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Drain to source voltage		V_{DSS}	-60	V
Gate to source voltage		V_{GSS}	$\pm$20	V
Drain current (DC)		I_D	$\pm$25	A
Drain current(pulse) *		I_D	$\pm$70	A
Power dissipation	Tc=25℃	P_D	50	W
	TA=25℃	P_D	1.5	W
Channel temperature		T_{ch}	150	℃
Storage temperature		T_{stg}	-55 to +150	℃

* PW$\leqslant$ 10μs, duty cycle $\leqslant$ 1 %

2SJ603

■ 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	$\mid Y_{fs} \mid$	V_{DS}=-10V,I_D=-13A	10	21		S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=-10V,I_D=-13A		38	48	mΩ
		V_{GS}=-4.0V,I_D=-13A		53	75	mΩ
Input capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0,f=1MHZ		1900		pF
Output capacitance	C_{oss}			350		pF
Reverse transfer capacitance	C_{rss}			140		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS(on)}$=-30V,I_D=--13A ,V_{DD}=-10V,R_G=0 Ω		10		ns
Rise time	t_r			11		ns
Turn-off delay time	$t_{d(off)}$			66		ns
Fall time	t_f			20		ns
Total Gate Charge	Q_G	I_D = -25A		38		nC
Gate to Source Charge	Q_{GS}	V_{DD}= -48 V		7		nC
Gate to Drain Charge	Q_{GD}	V_{GS} =-10 V		10		nC
Body Diode Forward Voltage	$V_{F(S-D)}$	I_F = 25A, V_{GS} = 0 V		1.0		V
Reverse Recovery Time	t_{rr}	I_F = 25 A, V_{GS} = 0 V		49		ns
Reverse Recovery Charge	Q_{rr}	d_i/d_t = 100 A / μ s		100		nC