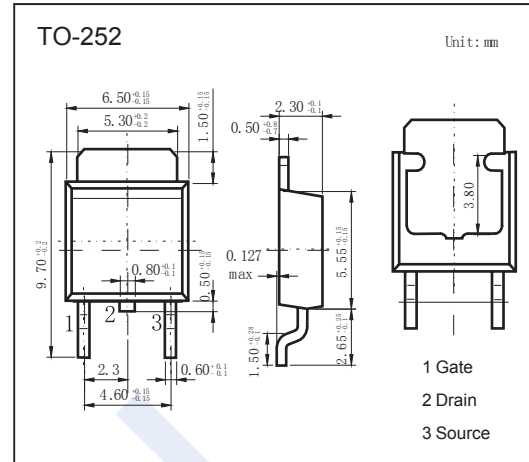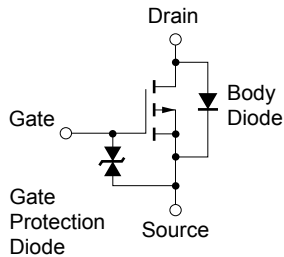# P-Channel MOSFET
2SJ600-Z

■ Features

- $V_{DS(V)}$ = -60V

- I_D = -25A

- $R_{DS(ON)} < 50m\Omega$ (V_{GS} = -10V)

- $R_{DS(ON)} < 79m\Omega$ (V_{GS} = -4V)

- Low Ciss: Ciss = 1900 pF (TYP.)

TO-252   Unit: mm

1 Gate
2 Drain
3 Source

Drain
Gate
Body Diode
Gate Protection Diode
Source

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-60	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current		I_D	-25	A
Pulsed Drain Current (Note.1)		I_{DM}	-70	
Single Avalanche Current (Note.2)		I_{AS}	-25	
Power Dissipation	Tc = 25℃	P_D	45	W
	Ta = 25℃		1	
Single Avalanche Energy (Note.2)		E_{AS}	62.5	mJ
Junction Temperature		T_J	150	℃
Junction Storage Temperature Range		T_{stg}	-55 to 150	

Note.1: PW ≤ 10us,Duty Cycle ≤ 1%

Note.2: Starting T_J = 25 °C, R_G = 25Ω , V_{GS} = –20 V → 0

P-Channel MOSFET

2SJ600-Z

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=-250μA, V_{GS}=0V	-60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V, V_{GS}=0V			-10	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	uA
Gate Cut off Voltage	$V_{GS(off)}$	V_{DS}=-10V, I_D=-1mA	-1.5		-2.5	V
Static Drain-Source On-Resistance	$R_{DS(On)}$	V_{GS}=-10V, I_D=-13A			50	mΩ
		V_{GS}=-4V, I_D=-13A			79	
Forward Transconductance	g_{FS}	V_{DS}=-10V, I_D=-13A	10	20		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=-10V, f=1MHz		1900		pF
Output Capacitance	C_{oss}			350		
Reverse Transfer Capacitance	C_{rss}			140		
Total Gate Charge	Q_g	V_{GS}=-10V, V_{DS}=-48V, I_D=-25A		38		nC
Gate Source Charge	Q_{gs}			7		
Gate Drain Charge	Q_{gd}			10		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS(on)}$=-10V, V_{DS}=-30V, I_D=-13A, R_G=0Ω		9		ns
Turn-On Rise Time	t_r			10		
Turn-Off DelayTime	$t_{d(off)}$			67		
Turn-Off Fall Time	t_f			19		
Body Diode Reverse Recovery Time	t_{rr}	I_F=-25A, V_{GS}=0, dI/dt=100A/μs		49		
Body Diode Reverse Recovery Charge	Q_{rr}			100		nC
Diode Forward Voltage	V_{SD}	I_F=-25A, V_{GS}=0V		-1		V