

Mos Field Effect Power Transistor

2SJ302

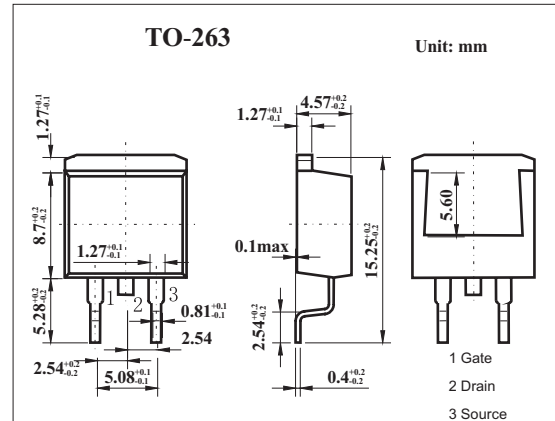
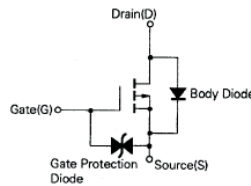
■ Features

- Low on-state resistance

$$R_{DS(on)} \leq 0.1 \Omega (V_{GS} = -10V, I_D = -8A)$$

$$R_{DS(on)} \leq 0.24 \Omega (V_{GS} = -4V, I_D = -6A)$$

- Low C_{iss} $C_{iss} = 1200PF$ TYP.



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	-60	V
Gate to source voltage	V_{GSS}	-20,+10	V
Drain current (DC)	I_D	± 16	A
Drain current(pulse) *	I_D	± 64	A
Power dissipation	P_D	75	W
Channel temperature	T_{ch}	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* $PW \leq 10 \mu s$; $d \leq 1\%$.

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS} = -60V, V_{GS} = 0$			-10	μA
Gate leakage current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0$			± 10	μA
Gate cut-off voltage	$V_{GS(off)}$	$V_{DS} = -10V, I_D = -1mA$	-1.0		-2.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = -10V, I_D = -8A$	5.0			s
Drain to source on-state resistance	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -8A$		75	100	m Ω
		$V_{GS} = -4V, I_D = -6A$		130	240	m Ω
Input capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0, f = 1MHz$		1200		pF
Output capacitance	C_{oss}			670		pF
Reverse transfer capacitance	C_{rss}			290		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS(on)} = -10V, V_{BD} = -30V, I_D = -8A$ $R_L = 3.75 \Omega, R_G = 10 \Omega$		30		ns
Rise time	t_r			170		ns
Turn-off delay time	$t_{d(off)}$			150		ns
Fall time	t_f			130		ns
Total Gate Charge	Q_G		$V_{GS} = -10V, I_D = -8A$		42	
Gate to Source Charge	Q_{GS}	$I_D = -16V$		3		nC
Gate to Drain Charge	Q_{GD}	$V_{DD} = -48V$		17		nC
Reverse Recovery Time	t_{rr}	$I_F = -16A, V_{GS} = 0, di/dt = 50A/\mu s$		110		ns
Reverse Recovery Charge	Q_{rr}				220	
Diode Forward Voltage	V_{SD}	$I_F = -16A, V_{GS} = 0$		1		V