

MOS Field Effect Power Transistors

2SJ324

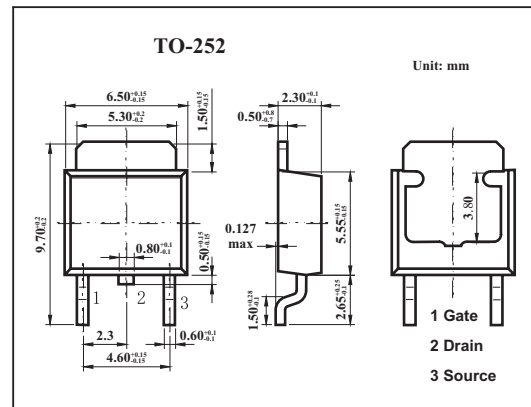
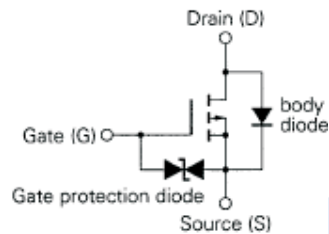
■ Features

- Low on-state resistance

$$R_{DS(on)} = 0.18 \, \Omega \, (V_{GS} = -10V, I_D = -1A)$$

$$R_{DS(on)} = 0.36 \, \Omega \, (V_{GS} = -4V, I_D = -0.8A)$$

- Built-in G-S Gate Protection Diode



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DS}	-30	V
Gate to source voltage (DC)	V_{GS}	-20, +10	V
Gate to source voltage (AC)	V_{GS}	± 20	V
Drain current (DC)	I_D	± 2.0	A
Drain current(pulse) *	I_D	± 8.0	A
Power dissipation $T_c = 25^\circ\text{C}$ $T_A = 25^\circ\text{C}$	P_D	20	W
		1.0	W
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 10 \, \mu\text{s}$; $d \leq 1\%$.

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain to source breakdown voltage	V _{DSS}	I _D =-10mA, V _{GS} =0	-200			V
Gate to source breakdown voltage	V _{GSS}	I _G =±100 μA, V _{DS} =0	±20			V
Drain cut-off current	I _{DSS}	V _{DS} =-30V, V _{GS} =0			-10	μA
Gate leakage current	I _{GSS}	V _{GS} =±16V, V _{DS} =0			±10	μA
Gate cut-off voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.0	-1.5	-2.0	V
Forward transfer admittance	Y _{fs}	V _{DS} =-10V, I _D =-1A	1.0	1.9		S
Drain to source on-state resistance	R _{DS(on)}	V _{GS} =-10V, I _D =-1A		0.18	0.25	Ω
		V _{GS} =-4V, I _D =-0.8A		0.36	0.52	Ω
Input capacitance	C _{iss}	V _{DS} =-10V, V _{GS} =0, f=1MHZ		330		pF
Output capacitance	C _{oss}			290		pF
Reverse transfer capacitance	C _{rss}			105		pF
Turn-on delay time	t _{d(on)}	V _{GS(on)} =-10V, V _{DD} =-15V, I _D =-1A R _L =15Ω, R _G =10Ω		7		ns
Rise time	t _r			35		ns
Turn-off delay time	t _{d(off)}			40		ns
Fall time	t _f			30		ns
Total Gate Charge	Q _g	V _{GS} =-10V, I _D =-2.0A, V _{DD} =-24V		12		nC
Gate to Source Charge	Q _{GS}			1.5		nC
Gate Drain Charge	Q _{GD}			4.5		nC
Body Diode Forward Voltage	V _F	I _F =2.0A, V _{GS} =0		0.9		V
Reverse Recovery time	t _{rr}	I _F =2.0A, V _{GS} =0, di/dt=50A/μs		50		ns
Reverse Recovery Charge	Q _{rr}			40		nC