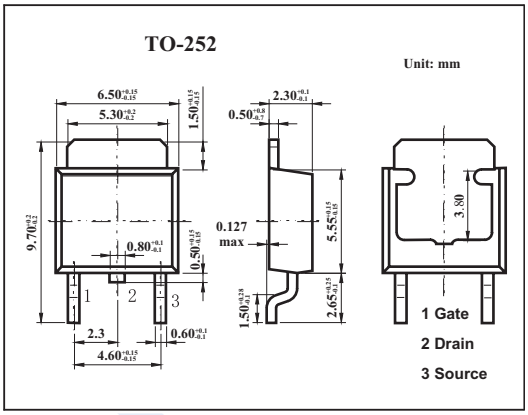
Hight Speed Power Switching

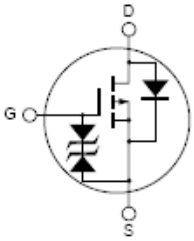
2SJ506S



Features

- Low on-resistance

  $R_{DS(on)}$ = 0.065Ω typ. (at V_{GS} = -10V, I_D = -5A)
- Low drive current
- High speed switching
- 4V gate drive devices.



Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	-60	V
Gate to source voltage (AC)	V_{GSS}	±20	V
Gate to source voltage (DC) *1	V_{GSS}	-20	V
Drain current (DC)	I_D	±20	A
Drain current(pulse) *2	I_D	±80	A
Power dissipation T_A=25℃	P_D	1.5	W
T_C=25℃	P_D	70	W
Channel temperature	T_{ch}	150	℃
Storage temperature	T_{stg}	-55 to +150	℃
Channel to Case	$R_{th(ch-C)}$	1.79	℃/W
Channel to Ambient	$R_{th(ch-A)}$	83.3	℃/W

*1 f = 20 kHz, Duty Cycle ⩽ 10% (+Side)

* 2 PW ⩽ 10 μs; d ⩽ 1%.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain to source breakdown voltage	V_{DSS}	I_D=-10mA,V_{GS}=0	-30			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 to source cutoff 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=-5A	10	16		S
Drain to source on-state resistance	$R_{DS(on)}$	V_{GS}=-10V,I_D=-5A		65	65	mΩ
		V_{GS}=-4.0V,I_D=-5A		110	180	mΩ
Input capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0,f=1MHZ		660		pF
Output capacitance	C_{oss}			440		pF
Reverse transfer capacitance	C_{rss}			140		pF
Turn-on delay time	$t_{d(on)}$	$V_{GS(on)}$=-10V,I_D=--5A ,R_L=2Ω		12		ns
Rise time	t_r			65		ns
Turn-off delay time	$t_{d(off)}$			85		ns
Fall time	t_f			65		ns