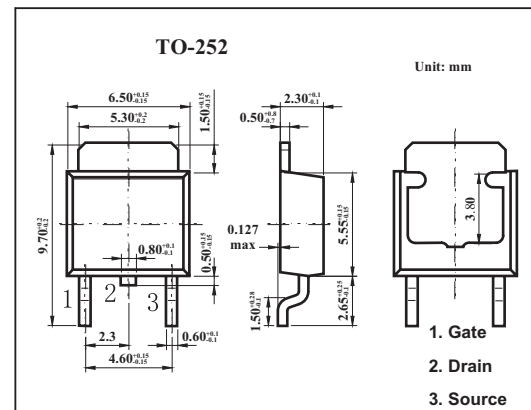
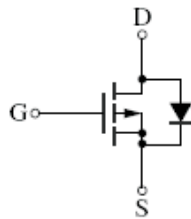


## Silicon P-channel power MOSFET

## 2SJ0582

## ■ Features

- Avalanche energy capability guaranteed
- High-speed switching
- No secondary breakdown

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

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	$V_{DSS}$	-200	V
Gate to Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current	$I_D$	$\pm 2$	A
Peak Drain Current	$I_{DP}$	$\pm 4$	A
Avalanche Energy Capability *	EAS	10	mJ
Power Dissipation $T_C = 25^\circ\text{C}$	$P_D$	10	W
Power Dissipation	$P_D$	1	W
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\*  $L = 5\text{ mH}$ ,  $I_L = 2\text{ A}$ , 1 pulse

## 2SJ0582

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain Cut-off Current	I <sub>DSS</sub>	V <sub>DS</sub> = -160 V, V <sub>GS</sub> = 0			-10	μ A
Gate Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20 V, V <sub>DS</sub> = 0			±10	μ A
Drain-Source Surrender Voltage	V <sub>BSS</sub>	I <sub>D</sub> = -1 mA, V <sub>GS</sub> = 0	-200			V
Gate Threshold Voltage	V <sub>th</sub>	V <sub>DS</sub> = -25 V, I <sub>D</sub> = -1 mA	-2		-4	V
Drain to Source On-state Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> = -10 V, I <sub>D</sub> = -1.0 A		1.5	2.0	Ω
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> = -25 V, I <sub>D</sub> = -1.0 A	1	1.7		S
Diode Forward Voltage	V <sub>DF</sub>	I <sub>DR</sub> = -2.0 A, V <sub>GS</sub> = 0			1.4	V
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = -20 V, V <sub>GS</sub> = 0, f = 1 MHz		400		pF
Output Capacitance	C <sub>oss</sub>			55		pF
Feedback Capacitance	C <sub>rss</sub>			25		pF
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = 100 V, I <sub>D</sub> = -1.0 A, R <sub>L</sub> = 100 Ω V <sub>GS</sub> = -10 V		12		ns
Rise Time	t <sub>r</sub>			15		ns
Turn-off Delay Time	t <sub>d(off)</sub>			25		ns
Fall Time	t <sub>f</sub>			50		ns
Thermal resistance (ch-c)	R <sub>th(ch-c)</sub>					12.5
Thermal resistance (ch-a)	R <sub>th(ch-a)</sub>				125	°C/W

## ■ Marking

Marking	J0582
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