2SJ0582

Silicon P-channel power MOSFET

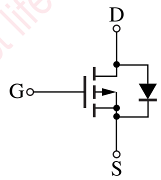
■ Features
- Avalanche energy capability guaranteed
- High-speed switching
- No secondary breakdown

■ Applications
- Non-contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching mode regulator

■ Package
- Code
  U-G2
- Pin Name
  1: Gate
  2: Drain
  3: Source

■ Marking Symbol: J0582

■ Internal Connection



■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Drain-source surrender voltage		V_{DSS}	–200	V
Gate-source surrender voltage		V_{GSS}	±20	V
Drain current		I_D	±2	A
Peak drain current		I_{DP}	±4	A
Avalanche energy capability *		EAS	10	mJ
Power dissipation		P_D	10	W
	$T_a = 25°C$		1	
Channel temperature		T_{ch}	150	°C
Storage temperature		T_{stg}	–55 to +150	°C

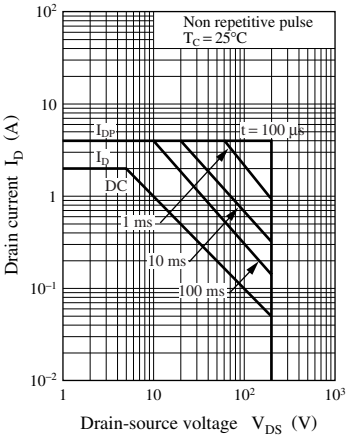
Note) *: L = 5 mH, I_L = 2 A, 1 pulse

■ Electrical Characteristics $T_C = 25°C \pm 3°C$

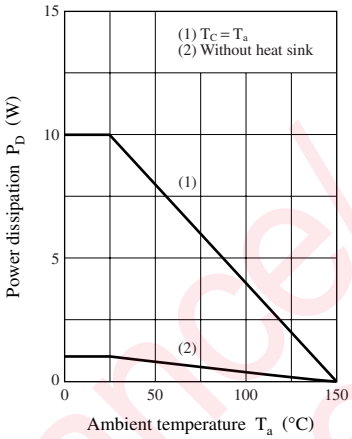
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source cutoff current	I_{DSS}	$V_{DS} = -160$ V, $V_{GS} = 0$			–10	µA
Gate-source cutoff current	I_{GSS}	$V_{GS} = \pm 20$ V, $V_{DS} = 0$			±10	µA
Drain-source surrender voltage	V_{DSS}	$I_D = -1$ mA, $V_{GS} = 0$	–200			V
Gate threshold voltage	V_{th}	$V_{DS} = -25$ V, $I_D = -1$ mA	–2.0		–4.0	V
Drain-source ON resistance	$R_{DS(on)}$	$V_{GS} = -10$ V, $I_D = -1.0$ A		1.5	2.0	Ω
Forward transfer admittance	$\|Y_{fs}\|$	$V_{DS} = -25$ V, $I_D = -1.0$ A	1.0	1.7		S
Diode forward voltage	V_{DF}	$I_{DR} = -2.0$ A, $V_{GS} = 0$			1.4	V
Short-circuit forward transfer capacitance (Common source)	C_{iss}	$V_{DS} = -20$ V, $V_{GS} = 0$, f = 1 MHz		400		pF
Short-circuit output capacitance (Common source)	C_{oss}			55		pF
Reverse transfer capacitance (Common source)	C_{rss}			25		pF
Turn-on delay time	$t_{d(on)}$	$V_{DD} = 100$ V, $I_D = -1.0$ A, $R_L = 100$ Ω		12		ns
Rise time	t_r	$V_{GS} = -10$ V		15		ns
Turn-off delay time	$t_{d(off)}$			50		ns
Fall time	t_f			25		ns
Thermal resistance (ch-c)	$R_{th(ch-c)}$				12.5	°C/W
Thermal resistance (ch-a)	$R_{th(ch-a)}$				125	°C/W

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

Safe operation area

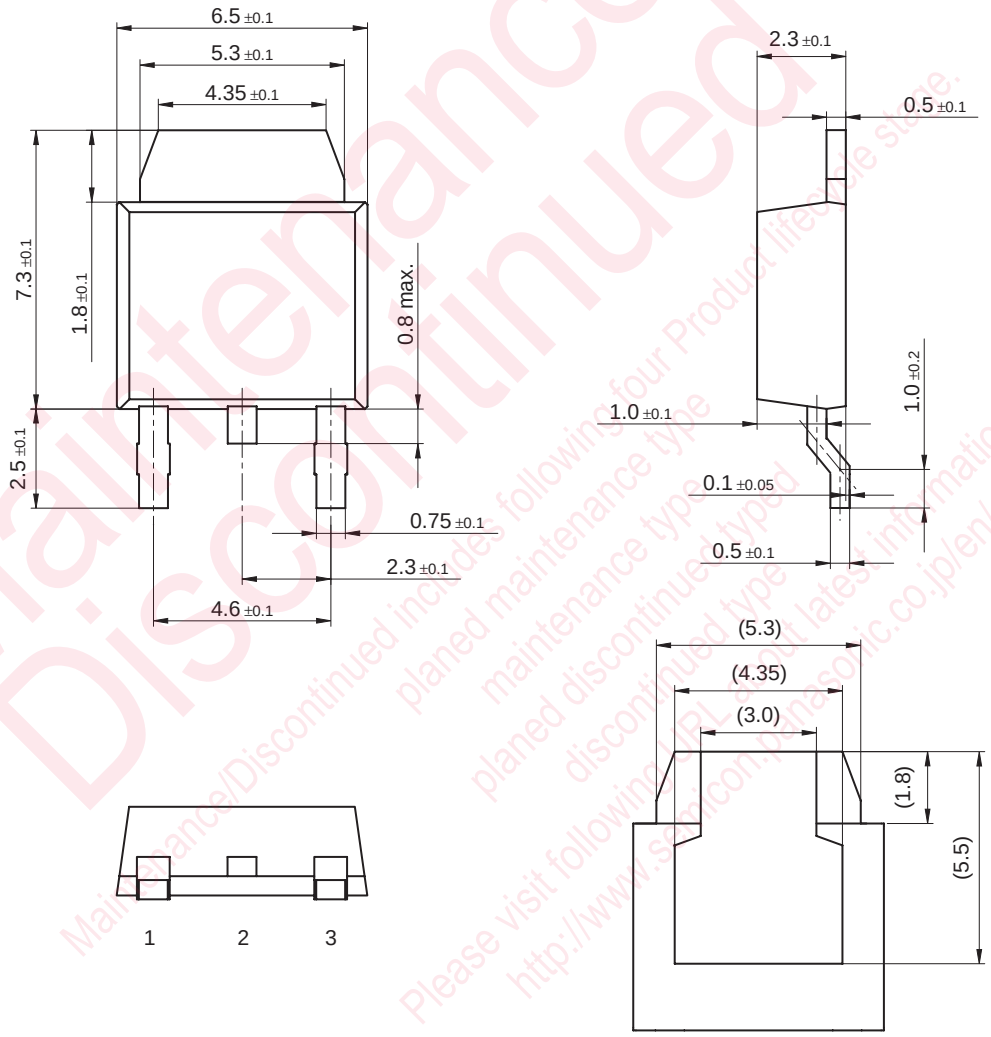


P_D — T_a



U-G2

Unit: mm



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