

GR3401

P-CHANNEL MOSFET

VOLTAGE	30 Volt	CURRENT	4.2 Ampere
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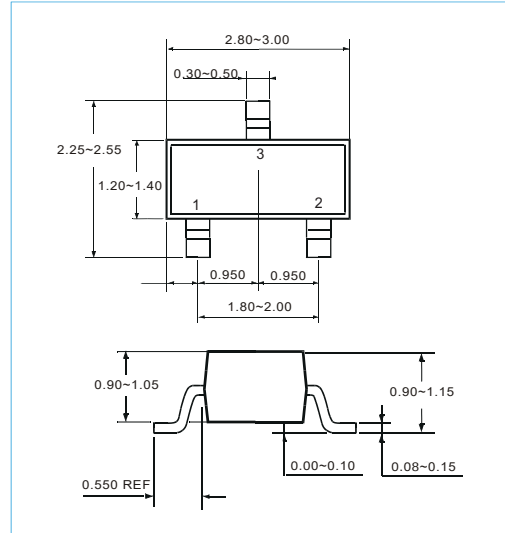
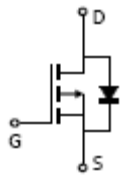
SOT-23 Unit:mm

FEATURES

- High dense cell design for extremely low RDS(ON).
- Exceptional on-resistance and maximum DC current capability
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS(T_A =25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-4.2	A
Power Dissipation	P _D	350	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	357	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

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ELECTRICAL CHARACTERISTICS($T_A = 25^\circ\text{C}$ unless otherwise noted)

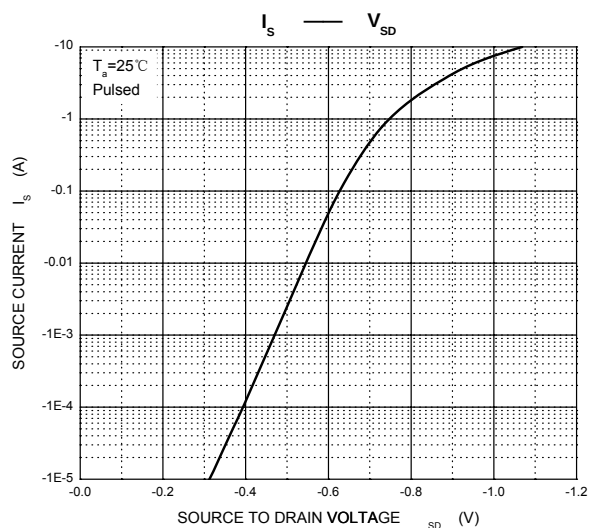
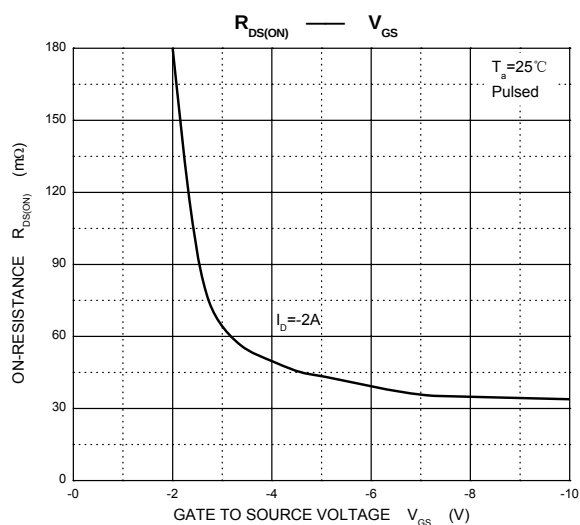
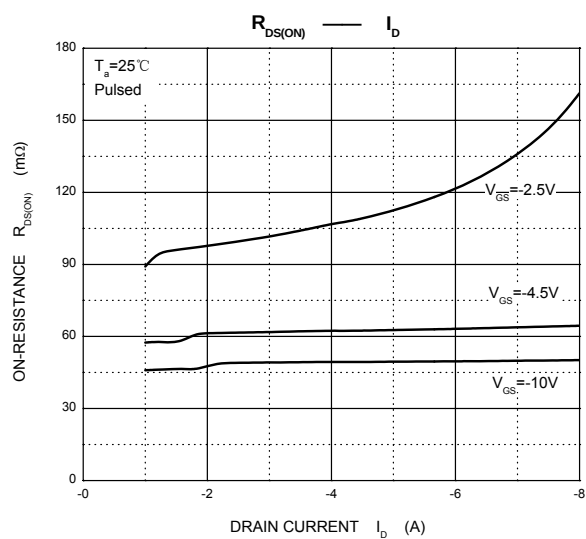
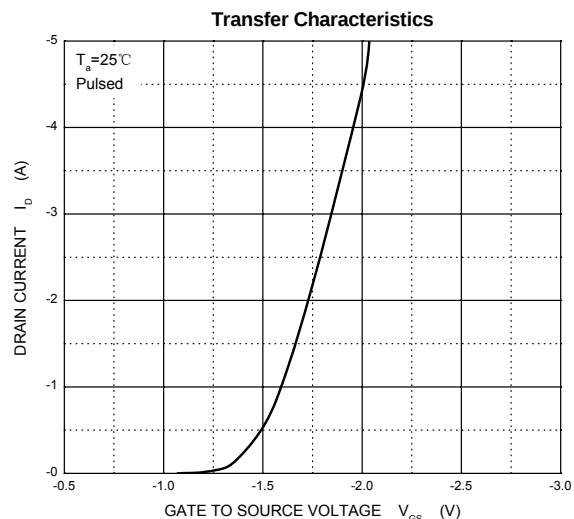
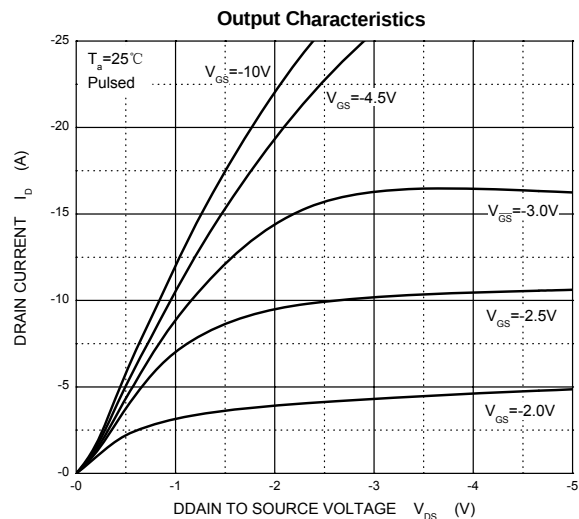
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =-250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =-24V, V _{GS} = 0V			-1	μA
Gate-source leakage current	I _{GSS}	V _{GS} =±12V, V _{DS} = 0V			±100	nA
On characteristics						
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =-10V, I _D =-4.2A		50	65	mΩ
		V _{GS} =-4.5V, I _D =-4A		60	75	mΩ
		V _{GS} =-2.5V, I _D =-1A		75	90	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =-5V, I _D =-5A	7			S
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.7	-0.9	-1.3	V
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} =-15V, V _{GS} =0V, f =1MHz		954		pF
Output capacitance	C _{oss}			115		pF
Reverse transfer capacitance	C _{rss}			77		pF
Switching characteristics (note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} =-10V, V _{DS} =-15V, R _L =3.6Ω, R _{GEN} =6Ω			6.3	ns
Turn-on rise time	t _r				3.2	ns
Turn-off delay time	t _{d(off)}				38.2	ns
Turn-off fall Time	t _f				12	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 1)	V _{SD}	I _S =-1A, V _{GS} =0V			-1	V

Notes:

1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.

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Typical Characteristics

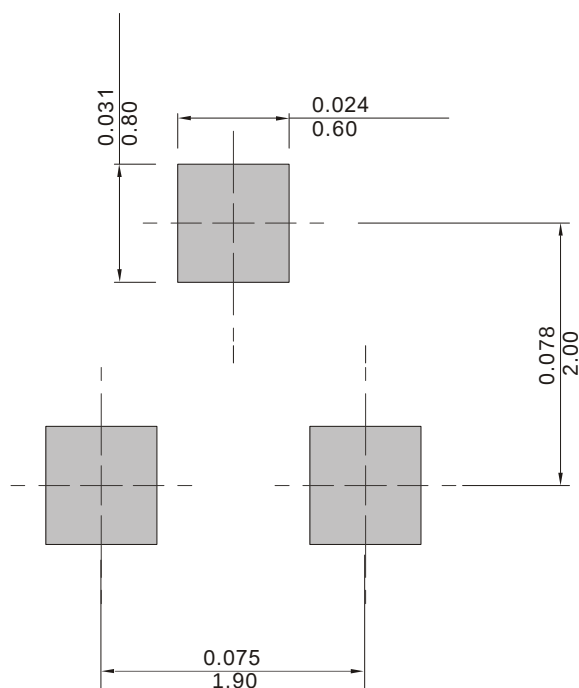


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MOUNTING PAD LAYOUT

SOT-23

Unit:Inch(mm)



ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
GR3401	SOT-23	7 Inch	3000