

# GR3407

## P-CHANNEL MOSFET

<b>VOLTAGE</b>	<b>30 Volt</b>	<b>CURRENT</b>	<b>4.1 Ampere</b>
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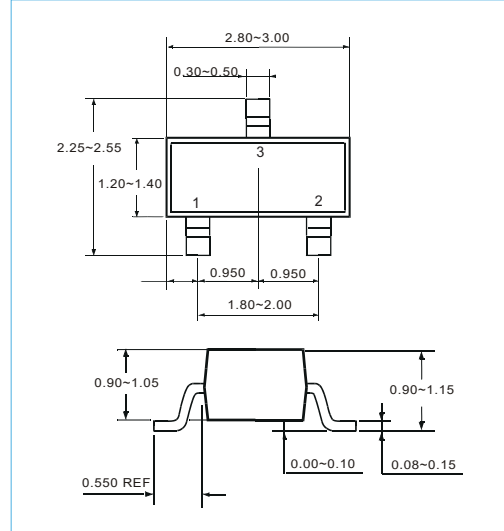
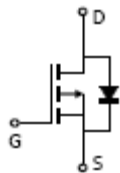
**SOT-23** Unit:mm

### 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<sub>A</sub> =25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DS</sub>	-30	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Continuous Drain Current	I <sub>D</sub>	-4.1	A
Power Dissipation	P <sub>D</sub>	350	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	357	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

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

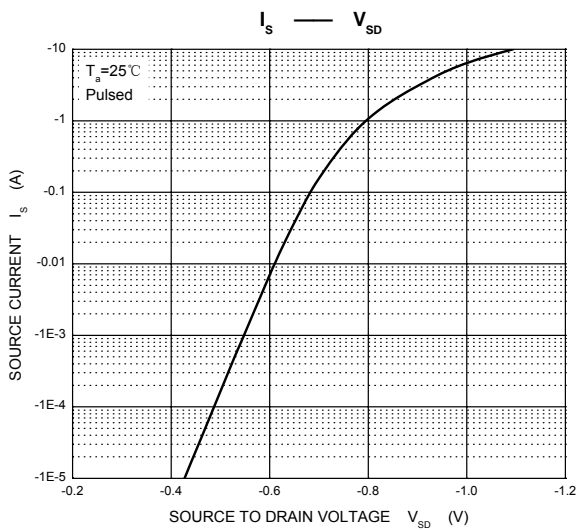
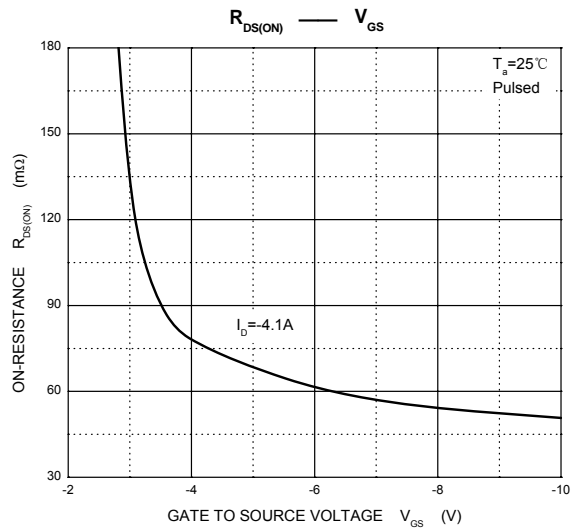
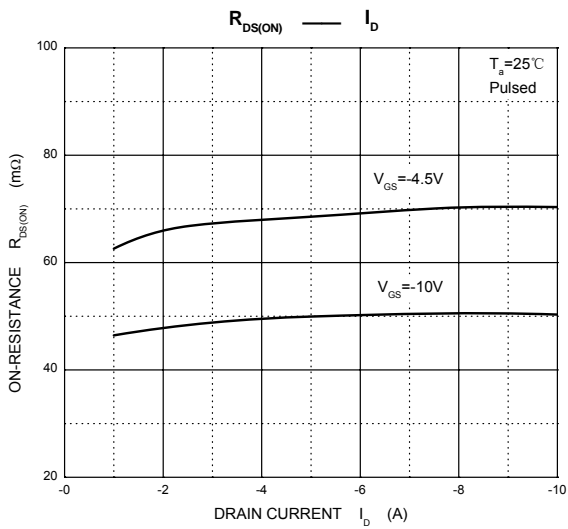
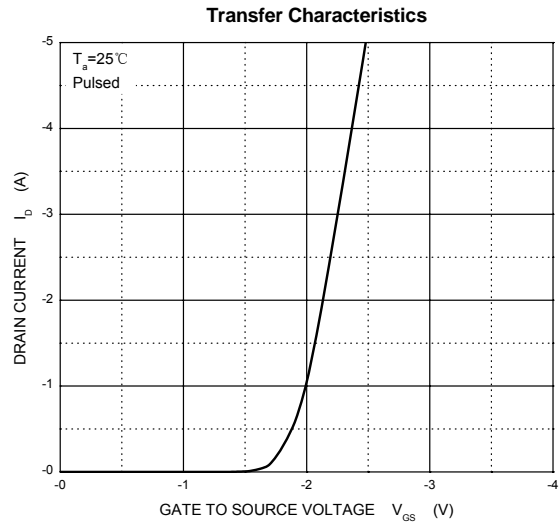
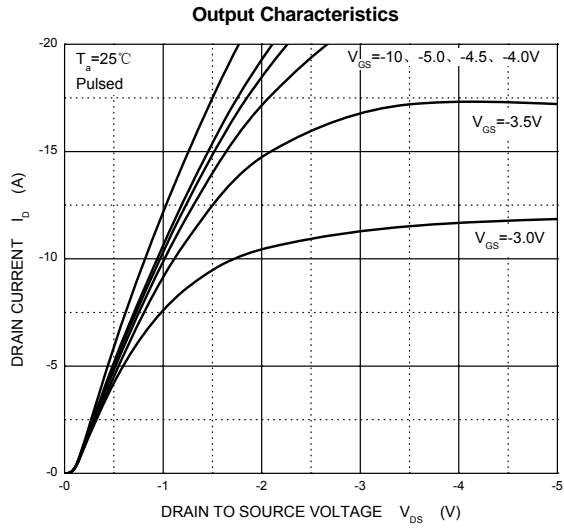
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>Static characteristics</b>						
Drain-source breakdown voltage	$BV_{DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-3€			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = -24V, V_{GS} = 0V$			-F	$\mu A$
Gate-source leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Drain-source on-resistance (note 1)	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -4.1A$		50	60	m $\Omega$
		$V_{GS} = -4.5V, I_D = -3A$		68	87	m $\Omega$
Forward transconductance (note 1)	$g_{FS}$	$V_{DS} = -5V, I_D = -4A$	5.5			S
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.4	-H	V
Diode forward voltage (note 1)	$V_{SD}$	$I_S = -1A, V_{GS} = 0V$			-F	V
<b>Dynamic characteristics (note 2)</b>						
Input capacitance	$C_{iss}$	$V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$		700		pF
Output capacitance	$C_{oss}$			120		pF
Reverse transfer capacitance	$C_{rss}$			75		pF
<b>Switching Characteristics (note 2)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = -10V, V_{DS} = -15V,$ $R_L = 3.6\Omega, R_{GEN} = 3\Omega$		8.6		ns
Turn-on rise time	$t_r$			5.0		ns
Turn-off delay time	$t_{d(off)}$			28.2		ns
Turn-off fall time	$t_f$			13.5		ns

#### 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

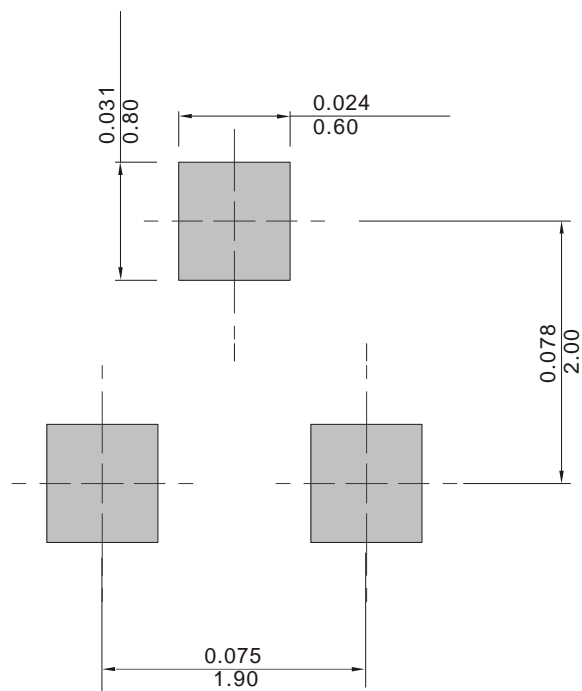


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## MOUNTING PAD LAYOUT

SOT-23

Unit:Inch(mm)



## ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
GR3407	SOT-23	7 Inch	3000