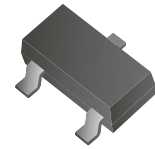


## CJ2324-G (N-Channel MOSFET )

RoHS Device



V(BR)DSS	RDS(on)MAX	Id
100V	234mΩ @ 10V	2A
	267mΩ @ 6V	
	278mΩ @ 4.5V	

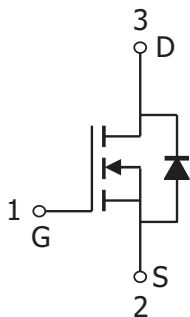
### Features

- TrenchFET Power MOSFET
- Low RDS(ON).
- Surface mount package.

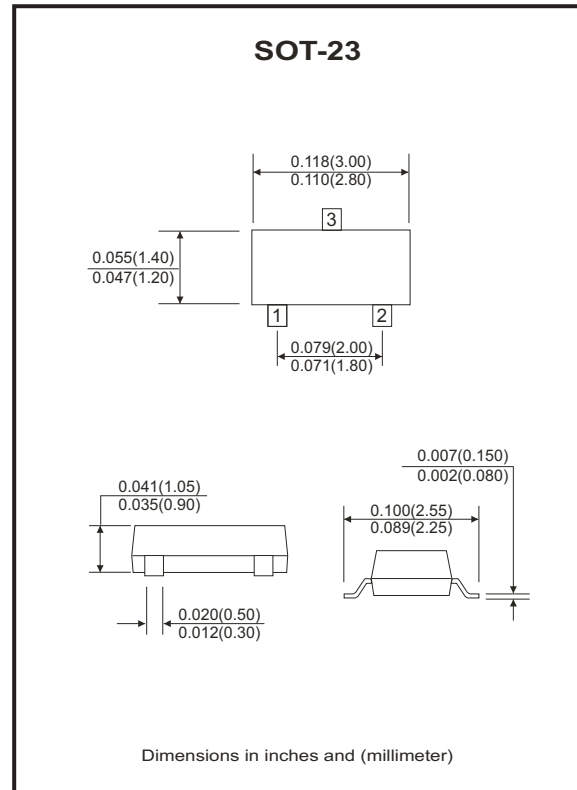
### Mechanical data

- Case: SOT-23, molded plastic.

### Circuit diagram



1. GATE
2. SOURCE
3. DRAIN



### Absolute Maximum Ratings (at Ta=25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-source voltage	V <sub>DS</sub>	100	V
Gate-source voltage	V <sub>GS</sub>	±20	V
Continuous drain current	I <sub>D</sub>	2	A
Pulsed drain current	I <sub>DM</sub> *	8	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>	-40 to +150	°C
Storage temperature	T <sub>STG</sub>	-55 to +150	°C
Lead temperature for soldering purposes(1/8" form case for 10 s)	T <sub>L</sub>	260	°C

\* Repetitive rating: Pulse width limited by junction temperature.

## Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 100V, V_{GS} = 0V$			1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage (note 1)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.2		2.8	V
Drain-source on-resistance (note 1)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 1.5A$			234	m $\Omega$
		$V_{GS} = 6V, I_D = 1A$			267	
		$V_{GS} = 4.5V, I_D = 0.5A$			278	
Forward transconductance (note 1)	$g_{FS}$	$V_{DS} = 20V, I_D = 1.5A$		2		S
Diode forward voltage (note 1)	$V_{SD}$	$I_S = 1.3A, V_{GS} = 0V$			1.2	V
<b>DYNAMIC PARAMETERS (note2)</b>						
Input capacitance	$C_{iss}$	$V_{DS}=50V, V_{GS}=0V, f=1MHz$		190		pF
Output capacitance	$C_{oss}$			22		
Reverse transfer capacitance	$C_{rss}$			13		
Gate resistance	$R_g$	$F=1MHz$	0.3		2.8	$\Omega$
<b>SWITCHING PARAMETERS (note2)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{DD}=50V, V_{GEN}=4.5V$ $R_L=39\Omega, R_G=1\Omega, I_D=1.3A$			45	nS
Turn-on rise time	$t_r$				39	
Turn-off delay time	$t_{d(off)}$				26	
Turn-on fall time	$t_f$				20	
Total gate charge	$Q_g$	$V_{DS}=50V, V_{GS}=4.5V$ $I_D=1.6A$			5.8	nC
Gate-source charge	$Q_{gs}$			0.75		
Gate-drain charge	$Q_{gd}$			1.4		

Note:

1. Pulse test : Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 0.5\%$  .
2. Guaranteed by design, not subject to production testing.

## TYPICAL CHARACTERISTICS ( CJ2324-G )

Fig.1 - Output Characteristics

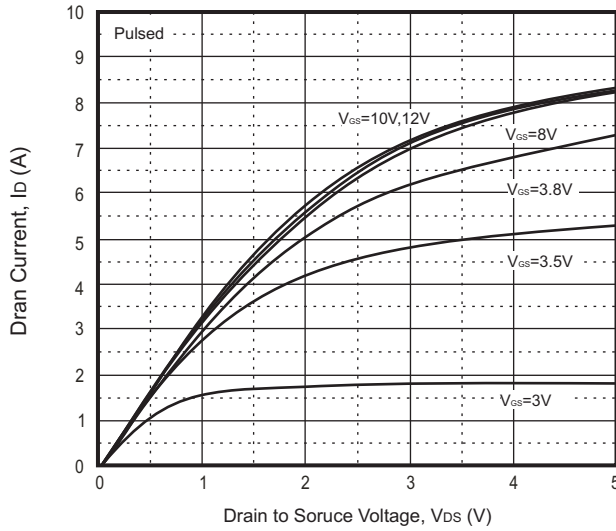


Fig.2 - Transfer Characteristics

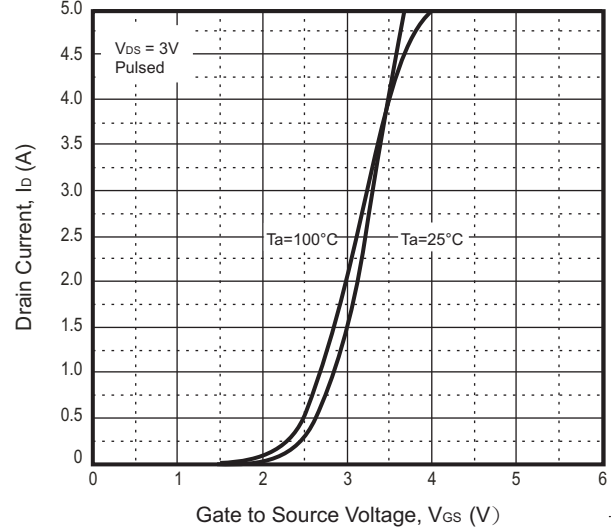


Fig.3 -  $R_{DS(ON)} - I_D$

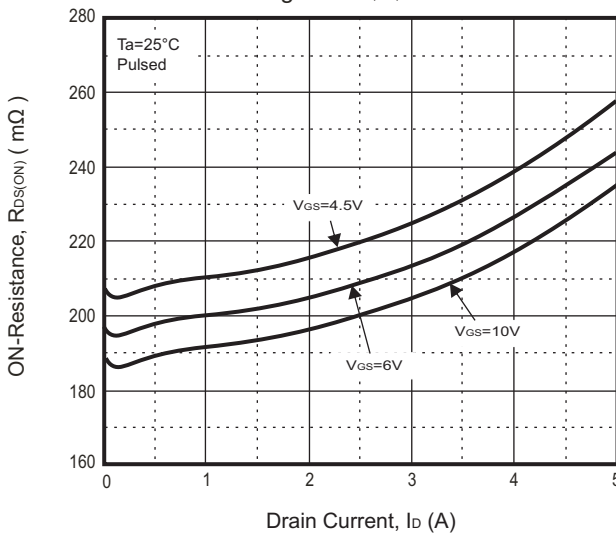


Fig.4 -  $R_{DS(ON)} - V_{GS}$

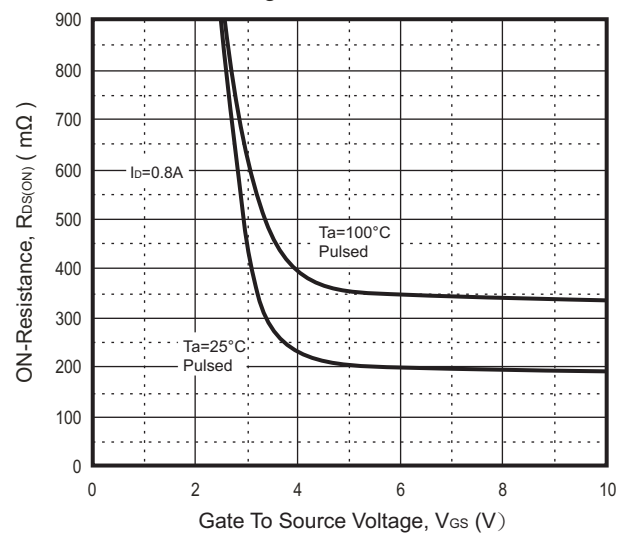


Fig.5 -  $I_S - V_{SD}$

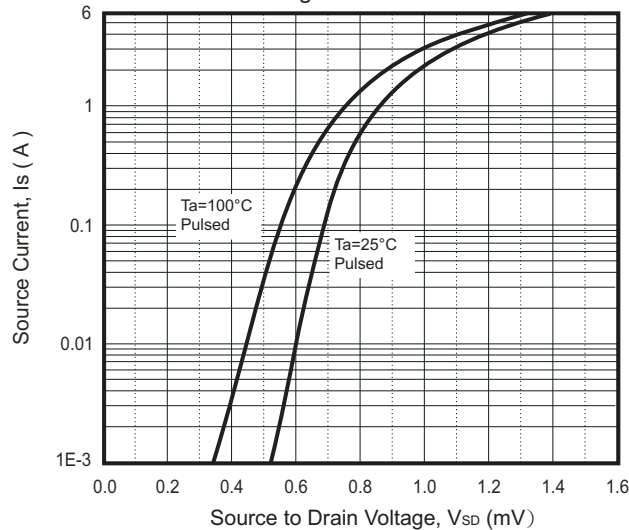
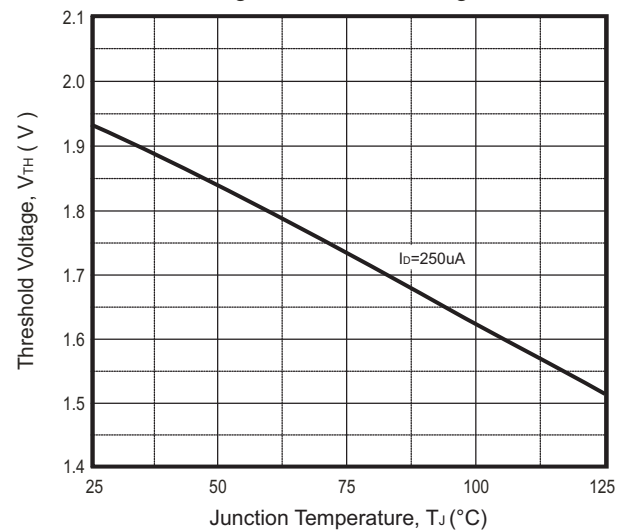
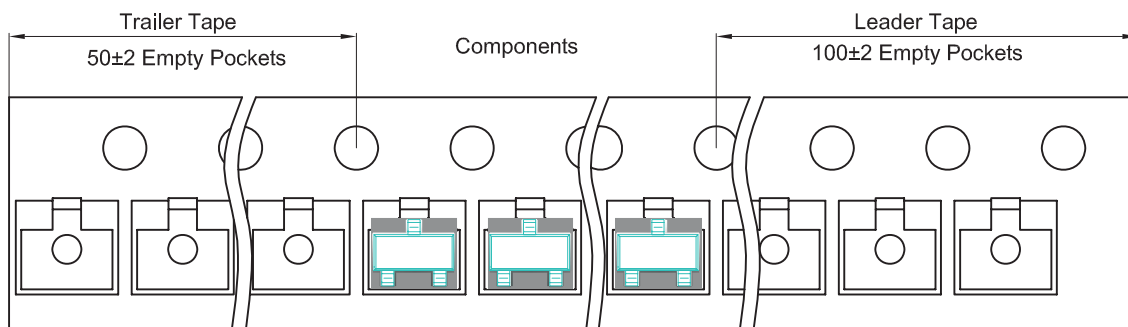
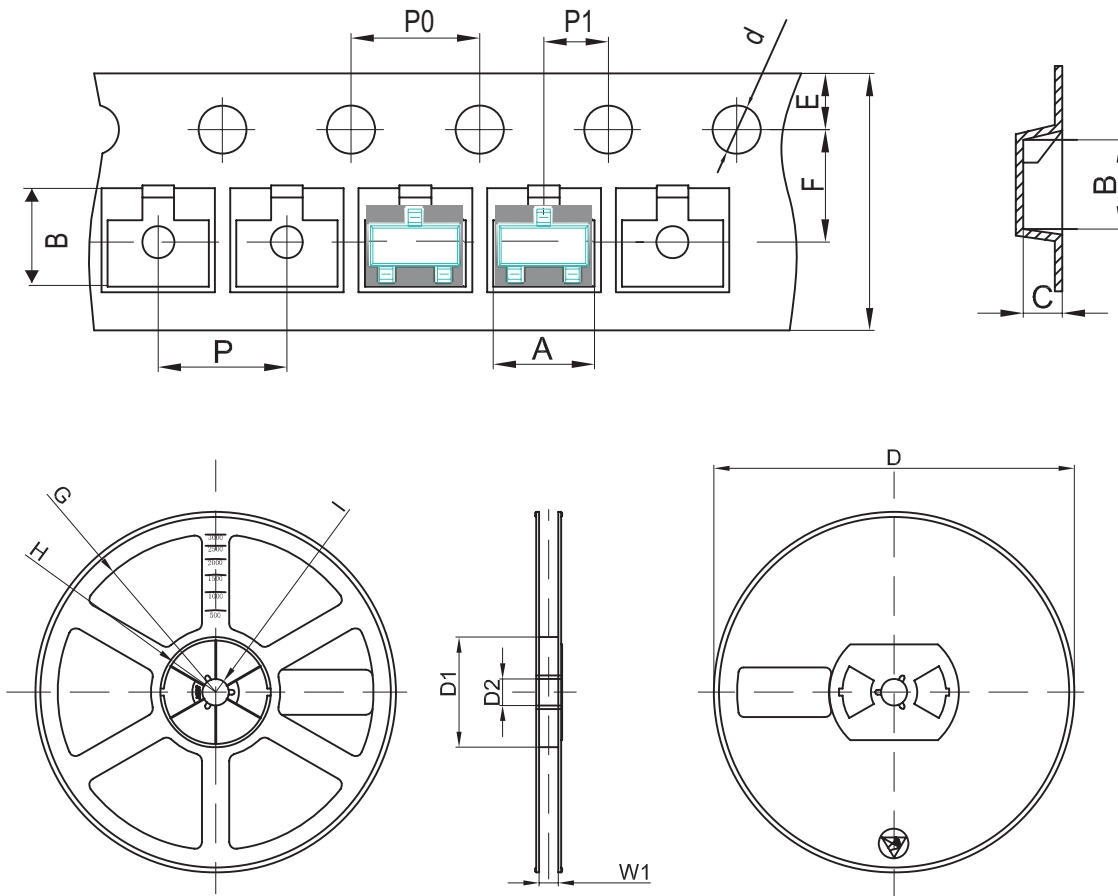


Fig.6 - Threshold Voltage



Company reserves the right to improve product design, functions and reliability without notice.

## Reel Taping Specification



SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

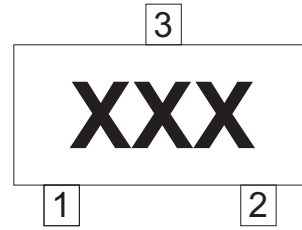
SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

Company reserves the right to improve product design, functions and reliability without notice.

REV:A

## Marking Code

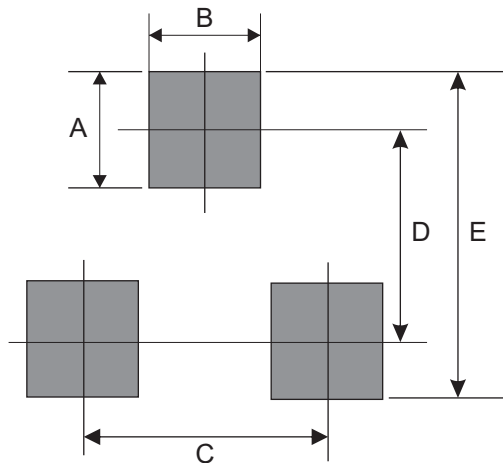
Part Number	Marking Code
CJ2324-G	S24



xxx = Product type marking code

## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	0.60	0.024
C	1.90	0.075
D	2.02	0.080
E	2.82	0.111



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
SOT-23	3,000	7