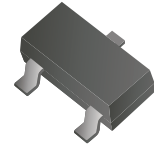


CJ2324-G (N-Channel MOSFET)

RoHS Device



V _(BR) DSS	R _{DS(on)} MAX	I _D
100V	234mΩ @ 10V	2A
	267mΩ @ 6V	
	278mΩ @ 4.5V	

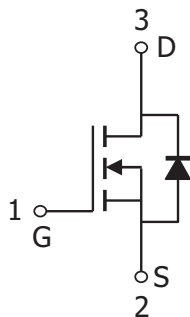
Features

- TrenchFET Power MOSFET
- Low R_{DS(ON)}.
- Surface mount package.

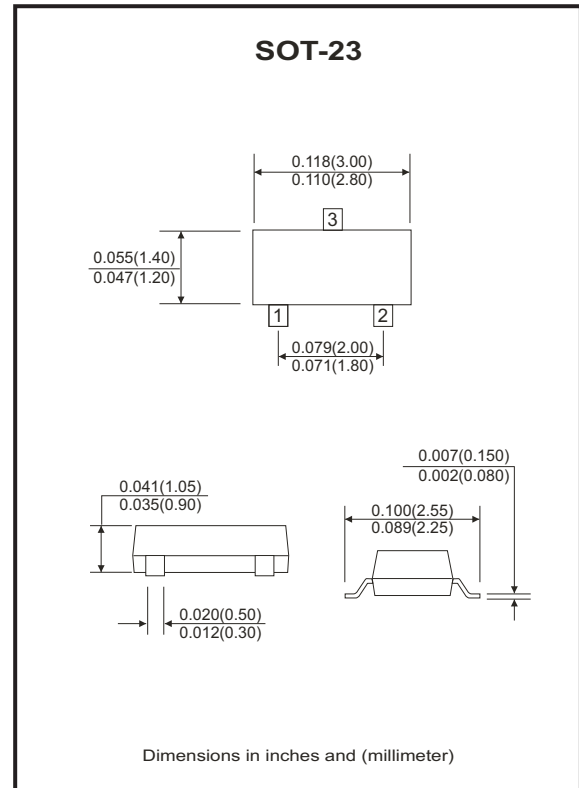
Mechanical data

- 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 _{DS}	100	V
Gate-source voltage	V _{GS}	±20	V
Continuous drain current	I _D	2	A
Pulsed drain current	I _{DM} *	8	A
Power dissipation	P _D	350	mW
Thermal resistance from junction to ambient	R _{ΘJA}	357	°C/W
Junction temperature	T _J	-40 to +150	°C
Storage temperature	T _{STG}	-55 to +150	°C
Lead temperature for soldering purposes(1/8" form case for 10 s)	T _L	260	°C

* Repetitive rating: Pulse width limited by junction temperature.

Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
STATIC PARAMETERS						
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	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 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 Ω
		$V_{GS} = 6V, I_D = 1A$			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
DYNAMIC PARAMETERS (note2)						
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	Ω
SWITCHING PARAMETERS (note2)						
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

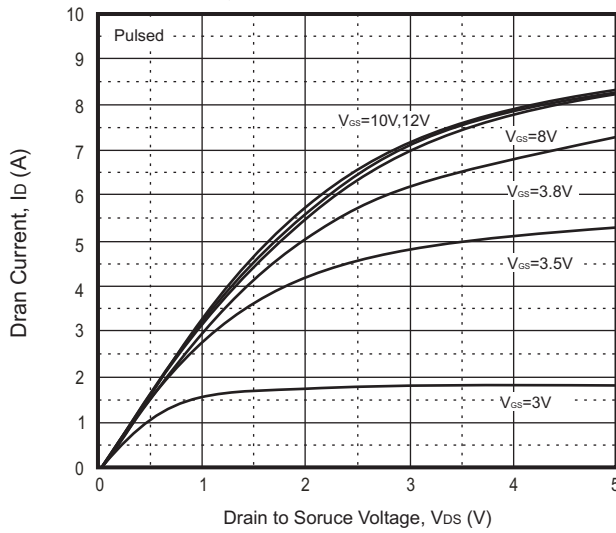


Fig.2 - Transfer Characteristics

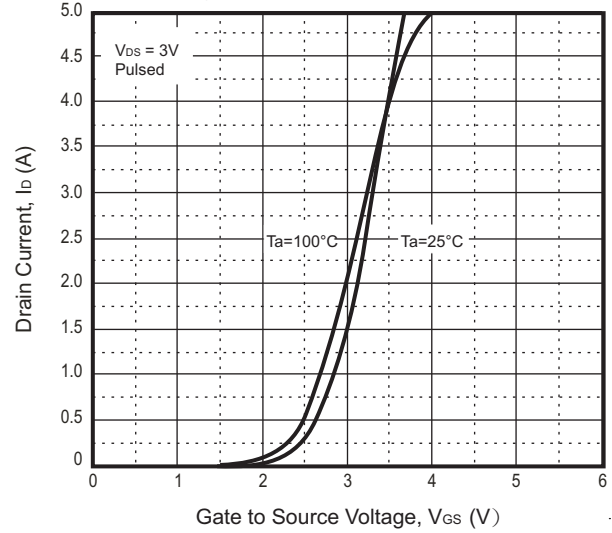


Fig.3 - $R_{DS(ON)}$ — I_D

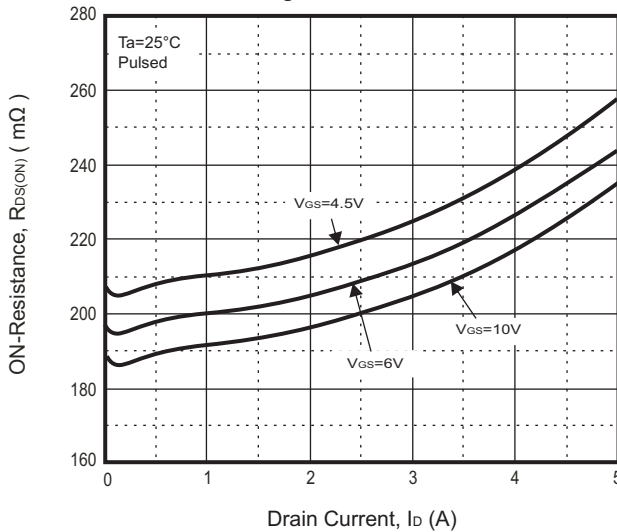


Fig.4 - $R_{DS(ON)}$ — V_{GS}

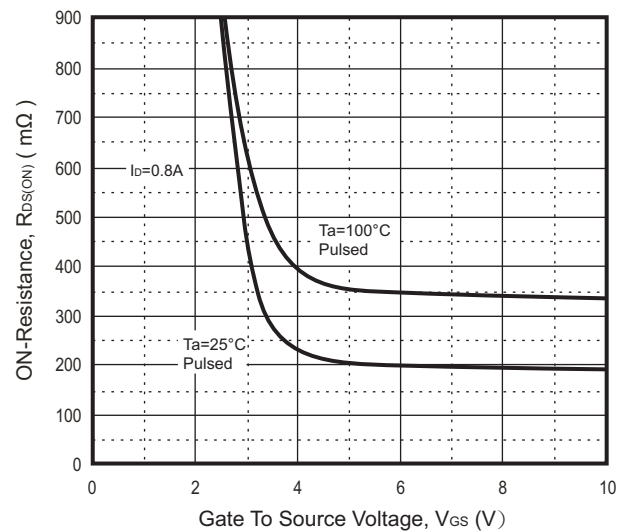


Fig.5 - I_S — V_{SD}

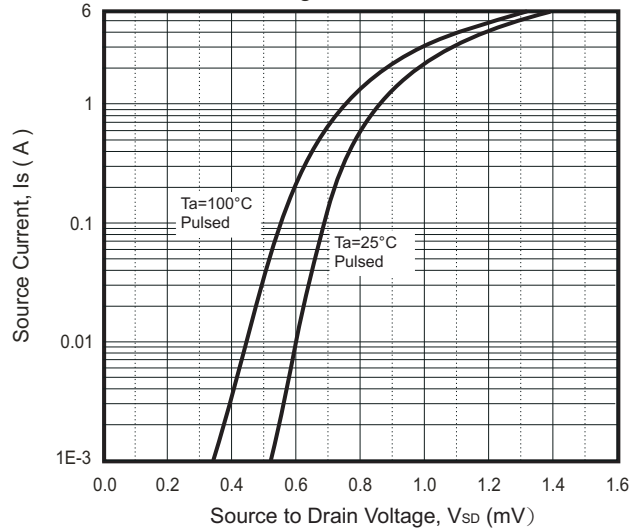
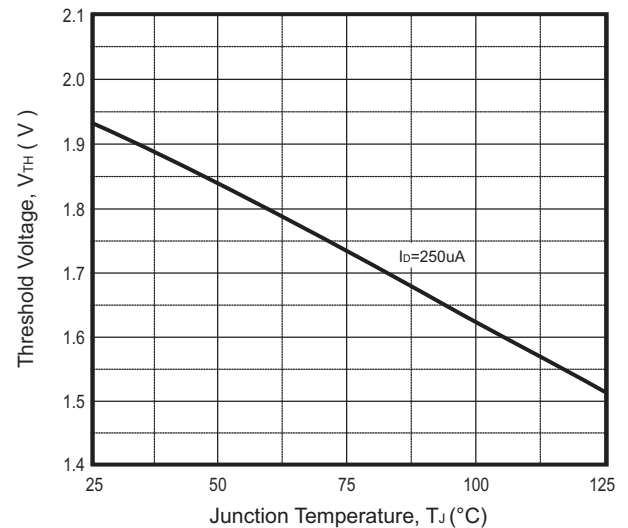
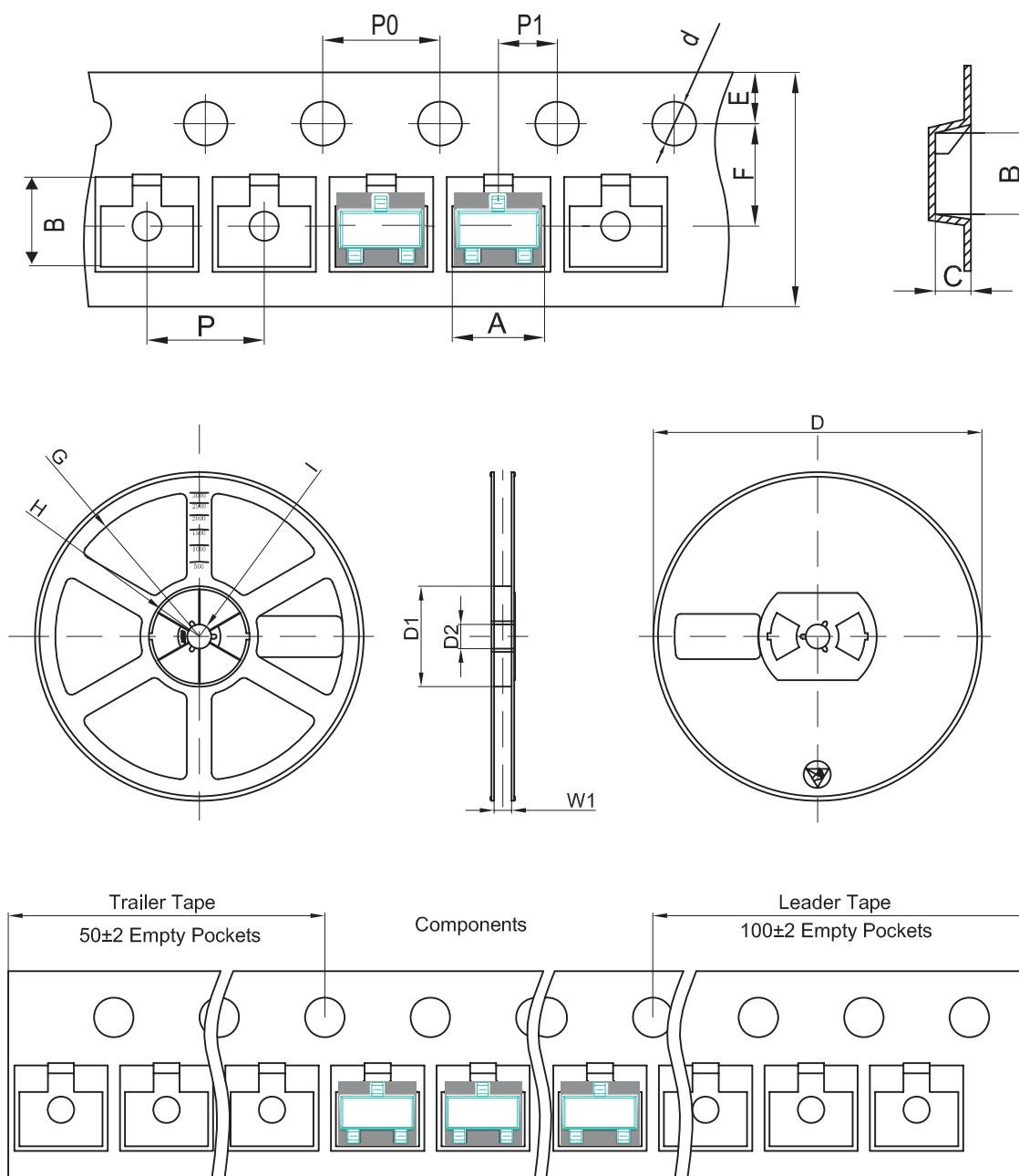


Fig.6 - Threshold Voltage



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

Reel Taping Specification

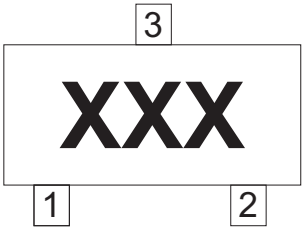


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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	$8.00 \pm 0.30 / - 0.10$	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	$0.315 \pm 0.012 / - 0.004$	0.484 ± 0.039

Marking Code

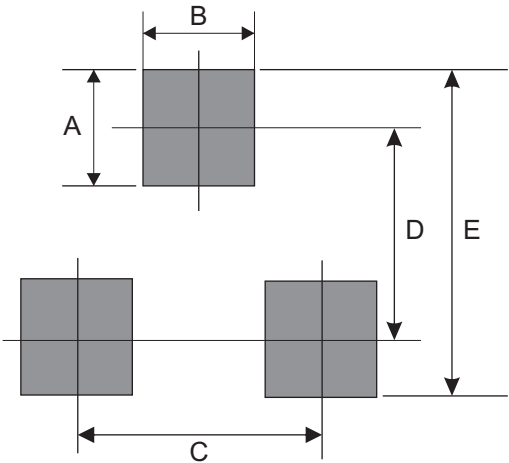
Part Number	Marking Code
CJ2324-G	S24



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