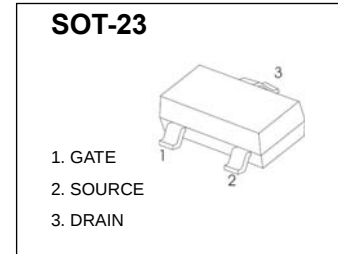


SHENZHEN JTD ELECTRONICS CO.,LTD

SOT-23 Plastic-Encapsulate MOSFETS

JTD3400 N-Channel Enhancement Mode Field Effect Transistor

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
30V	21mΩ@ 10V	5.8A
	22.5mΩ@4.5V	



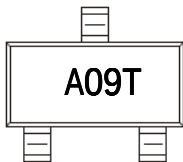
FEATURE

- High dense cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability

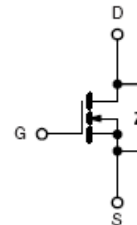
APPLICATION

- Load/Power Switching
- Interfacing Switching

MARKING



Equivalent Circuit



Maximum ratings ($T_a=25^{\circ}\text{C}$ 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	5.8	A
Drain Current-Pulsed ^①	I_{DM}	30	A
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

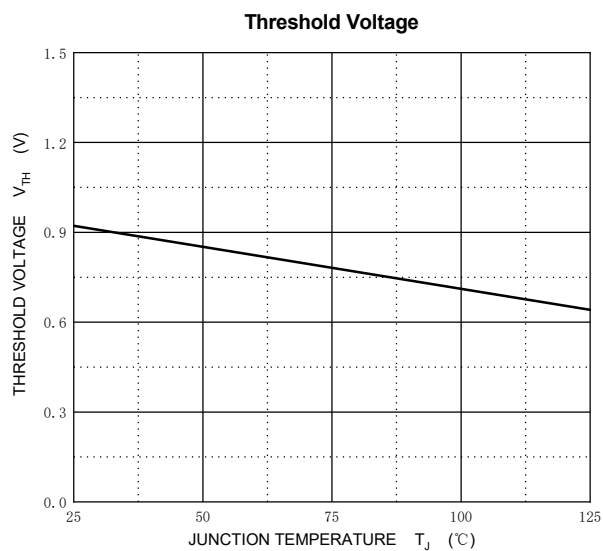
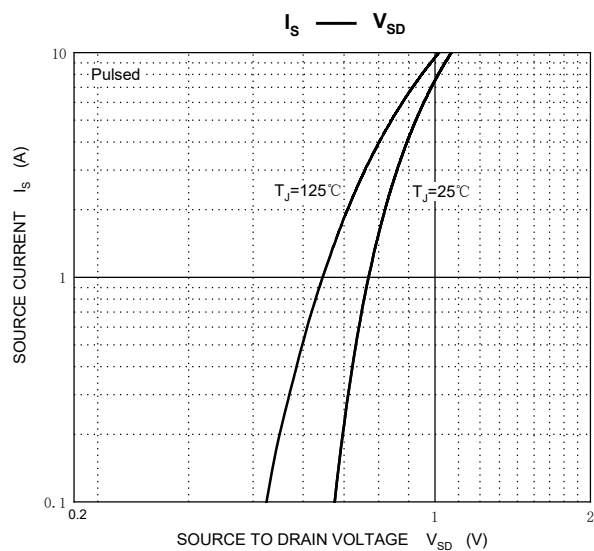
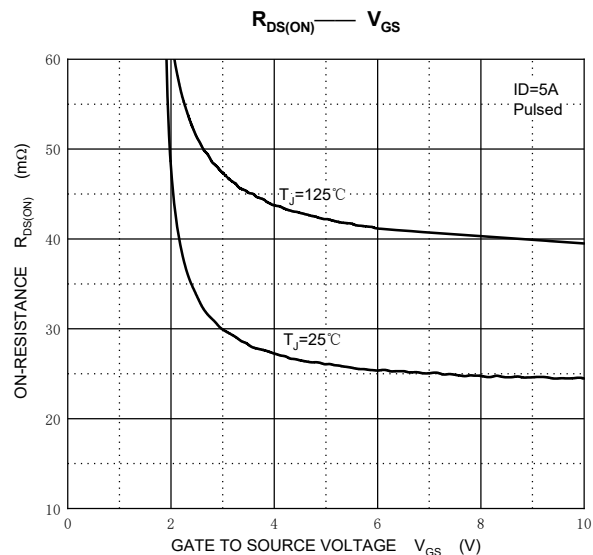
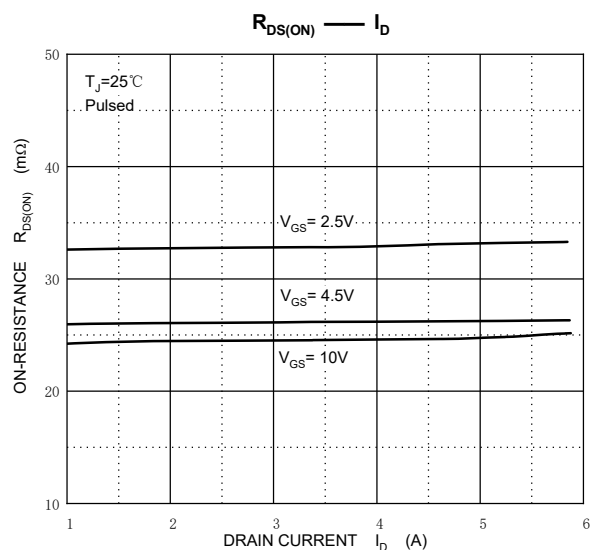
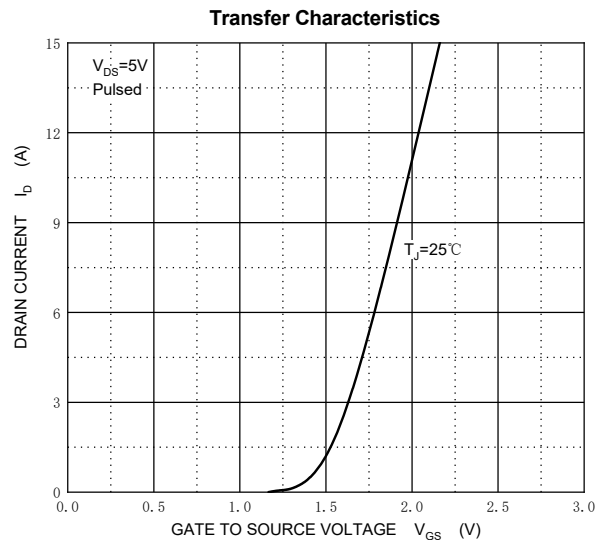
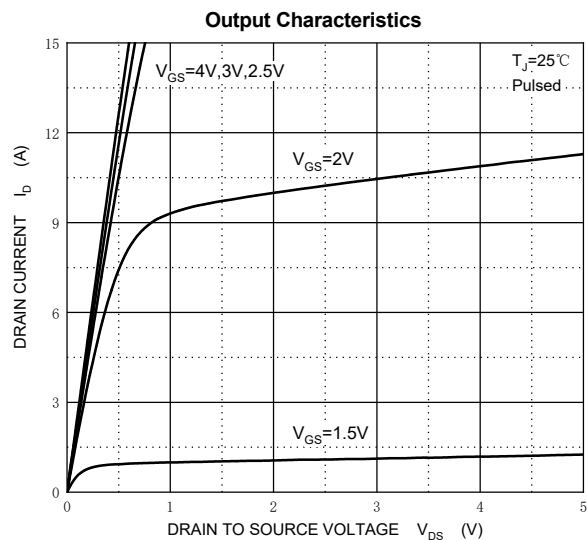
$T_a=25^{\circ}\text{C}$ unless otherwise specified

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} =30V,V _{GS} = 0V,T _J =25℃			1	μA
		V _{DS} =24V,V _{GS} = 0V,T _J =125℃			1	mA
Gate-source leakage current	I _{GSS}	V _{GS} =±12V, V _{DS} = 0V			±100	nA
On characteristics						
Drain-source on-resistance ②	R _{DS(on)}	V _{GS} =10V, I _D =1A		16	21	mΩ
		V _{GS} =4.5V, I _D =1A		17	22.5	mΩ
Forward transconductance	g _{FS}	V _{DS} =5V, I _D =5A	8			S
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5	0.8	1.1	V
Dynamic Characteristics ③						
Input capacitance	C _{iss}	V _{DS} =15V,V _{GS} =0V,f =1MHz		820	1050	pF
Output capacitance	C _{oss}			99		pF
Reverse transfer capacitance	C _{rss}			77		pF
Gate resistance	R _g	V _{DS} =0V,V _{GS} =0V,f =1MHz		3.6		Ω
Switching Characteristics ③						
Turn-on delay time	t _{d(on)}	V _{GS} =10V,V _{DS} =15V, R _L =2.7Ω,R _{GEN} =3Ω		3.3	5	ns
Turn-on rise time	t _r			4.8	7	ns
Turn-off delay time	t _{d(off)}			26	40	ns
Turn-off fall time	t _f			4	6	ns
Total Gate Charge	Q _g	V _{DS} =10V,I _D =5A, V _{GS} =6V		9.5		nC
Gate-Source Charge	Q _{gs}			1.5		nC
Gate-Drain Charge	Q _{gd}			3		nC
Drain-source diode characteristics and maximum ratings						
Diode forward voltage ②	V _{SD}	I _S =1A,V _{GS} =0V			1	V
Continuous drain-source diode forward current	I _S				5.8	A
Pulsed drain-source diode forward current①	I _{SM}				30	A

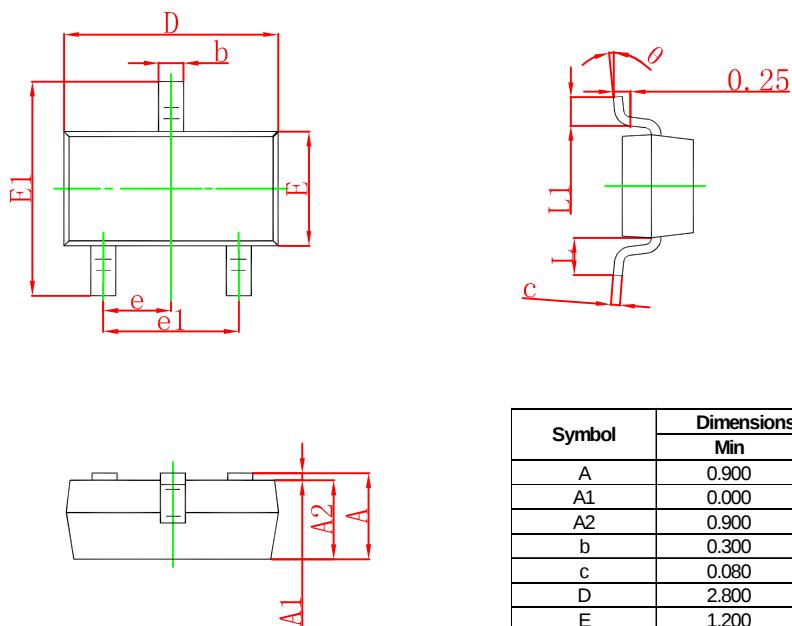
Note :

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
3. Guaranteed by design, not subject to production testing.

Typical Characteristics

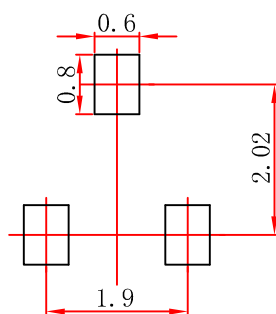


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout

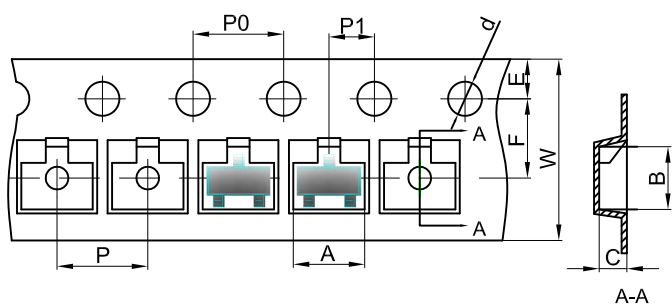


Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

NOTICE

JTD reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JTD does not assume any liability arising out of the application or use of any product described herein.

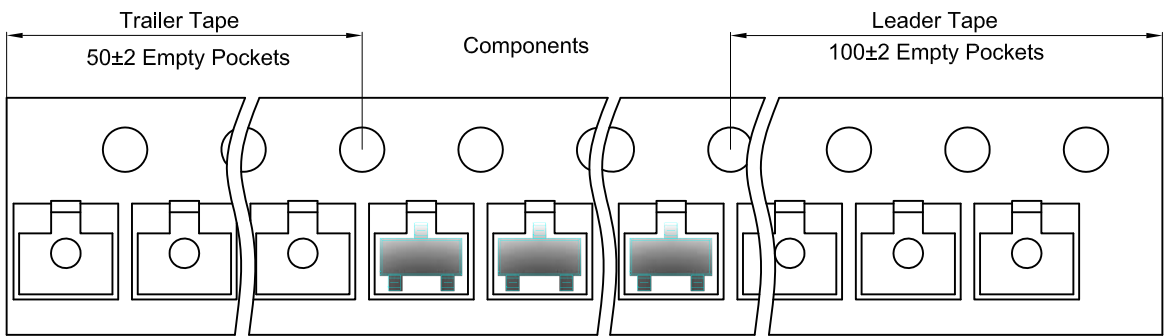
SOT-23 Embossed Carrier Tape



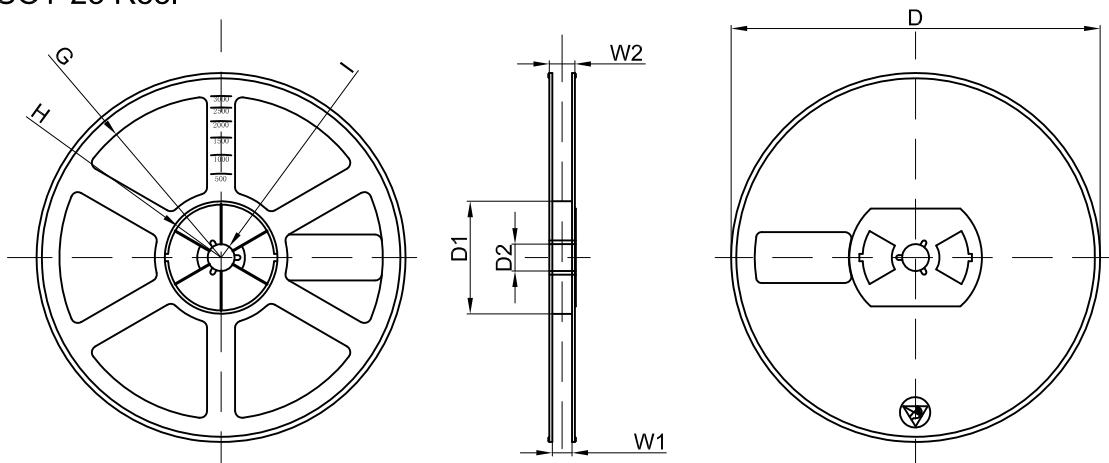
Packaging Description:
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	