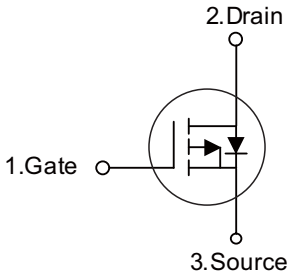
■ PRODUCT CHARACTERISTICS

VDSS	-30V
R_{DS}(on)Typ(V_{GS}@=-4.5 V)	48mΩ
R_{DS}(on)Typ(V_{GS}@=-2.5 V)	55mΩ
ID	-4.2

Symbol



■ APPLICATIONS

Load/Power Switching

Interfacing Switching

■ FEATURES

Advanced trench process technology

High Density Cell Design For Ultra Low On-Resistance

■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
N/A	MOT3401AB2	SOT-23	3000pieces/Real

■ ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

PARAMETER		SYMBOL	RATINGS	UNIT
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	±12	V
Continuous Drain Current		I_D	-4.2	A
Pulsed Drain Current		I_{DM}	-30	A
Maximum Power Dissipation	TA = 25°C	P_D	1.4	W
	TA = 75°C		1	W
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	°C
Junction-to-Ambient Thermal Resistance (PCB mounted)		$R_{\theta JA}$	125	°C/W

■ELECTRICAL CHARACTERISTICS (T_C=25°C, unless otherwise specified)

Parameter	Symbol	Test condition	Min.	Typ.	Miax.	Unit
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0V, I_D = -250uA	-30	-	-	V
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS} = -10V, I_D = -4.2A	-	48	55	mΩ
		V_{GS} = -4.5V, I_D = -3A	-	53	65	mΩ
		V_{GS} = -2.5V, I_D =-1A	-	65	75	mΩ
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D = -250uA	-0.7	-1	-1.3	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = -24V, V_{GS} = 0V	-	-	-1	uA
Gate Body Leakage	I_{GSS}	V_{GS} = ± 12V, V_{DS} = 0V	-	-	± 100	nA
Forward Transconductance	g_{fs}	V_{DS} = -5V, I_D = -5A	7	11		S
Dynamic						
Total Gate Charge	Q_g	V_{DS} = 20V, I_D = 5.7A V_{GS} = 10V	-	9.4	-	nC
Gate-Source Charge	Q_{gs}		-	2	-	nC
Gate-Drain Charge	Q_{gd}		-	3	-	nC
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = 20V, RL=20Ω I_D = 1A, V_{GEN} = 10V R_G = 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
Input Capacitance	C_{iss}	V_{DS} = 8V, V_{GS} = 0V f = 1.0 MHz	-	954	-	pF
Output Capacitance	C_{oss}		-	115	-	pF
Reverse Transfer Capacitance	C_{rss}		-	77	-	pF
Source-drain diode						
Max. Diode Forward Current	I_S		-	-	-2.2	A
Diode Forward Voltage	V_{SD}	I_S = 2.9A, V_{GS} = 0V	-	-	-1.0	V

Note: Pulse test: pulse width <= 300us, duty cycle<= 2%

■ TYPICAL CHARACTERISTICS

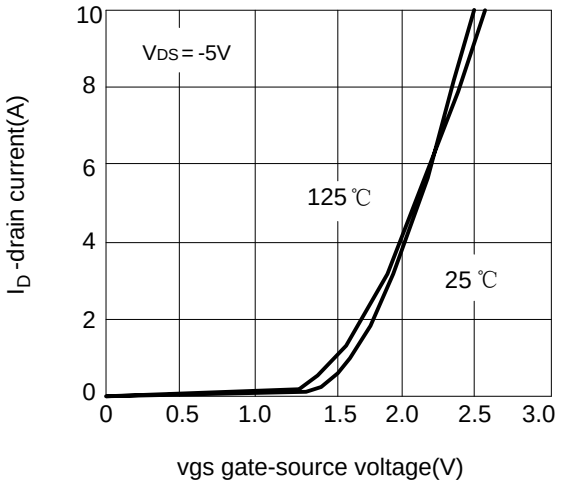


Fig.1 transfer characteristics

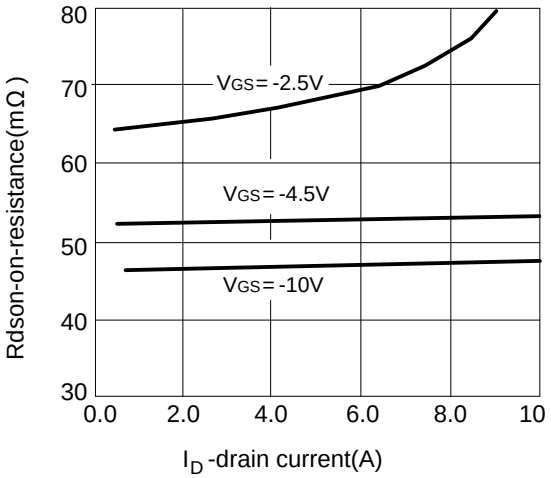


Fig.2 on resistance vs gate to source voltage

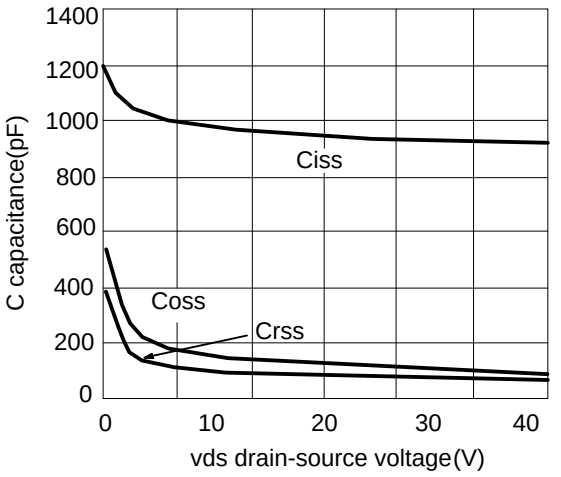


Fig.3 capacitance vs vds

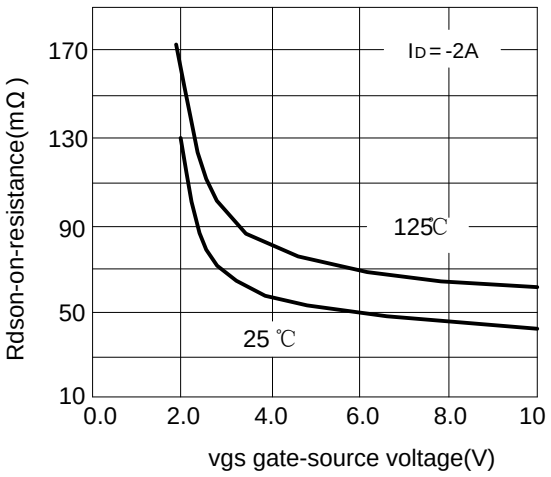


Fig.4 on resistance vs gate to source voltage

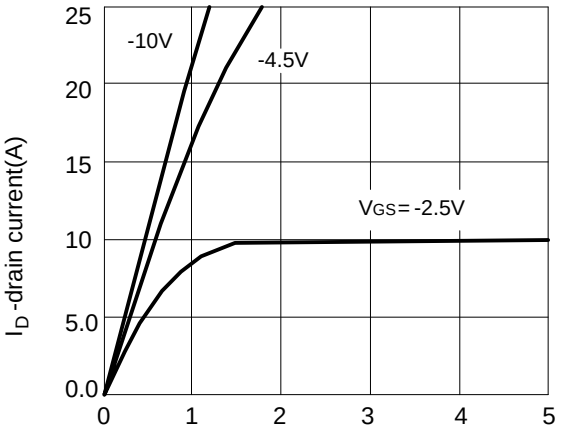
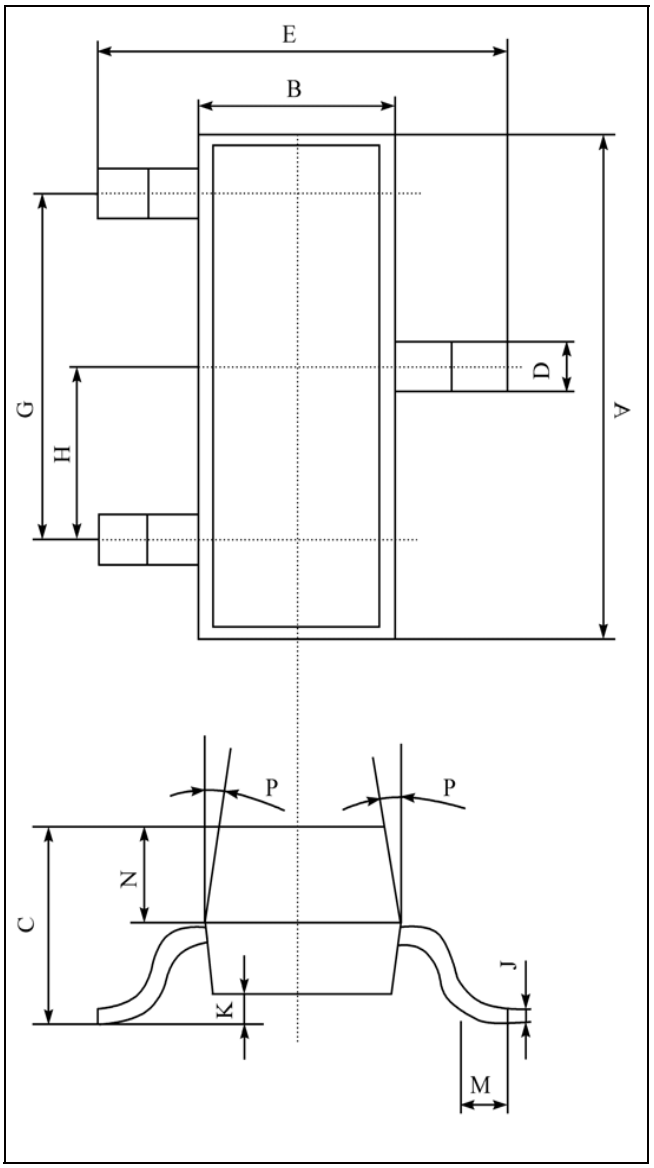


Fig.5 output characteristics

■SOT-23 PACKAGE OUTLINE DIMENSIONS

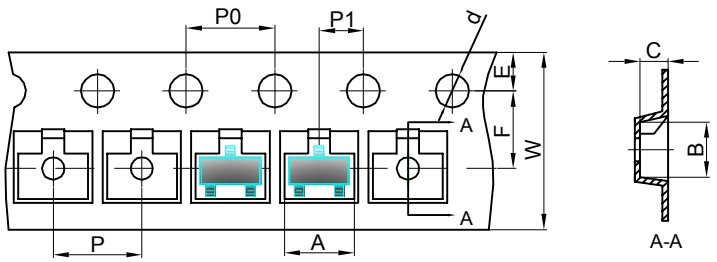


单位（UNIT）：mm

序号	数值及公差
A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.20
N	0.60±0.10
P	7±2°

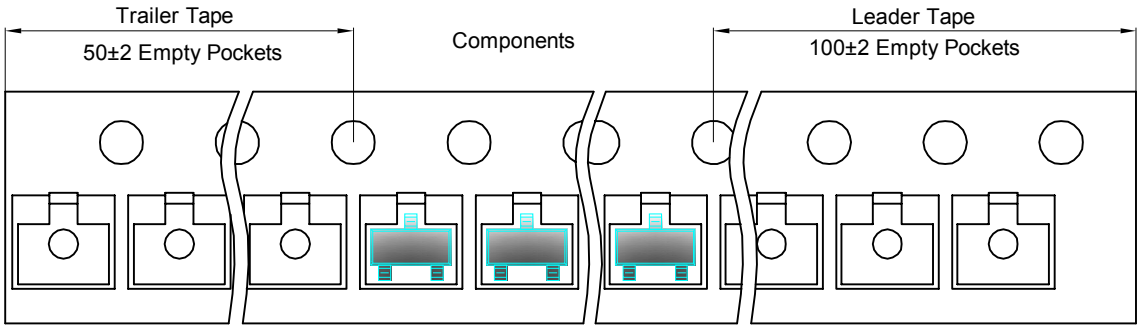
Packing
SOT-23 包装规格
SMD片式表面贴封装
包装方式: 载带卷盘包装
Tape & Reel, 3Kpcs/Reel
每卷数量3000只（3Kpcs/Reel）
每盒数量45000只（45Kpcs/BOX）
每箱数量180000只（180Kpcs/Cartons）

SOT-23 Embossed Carrier Tape

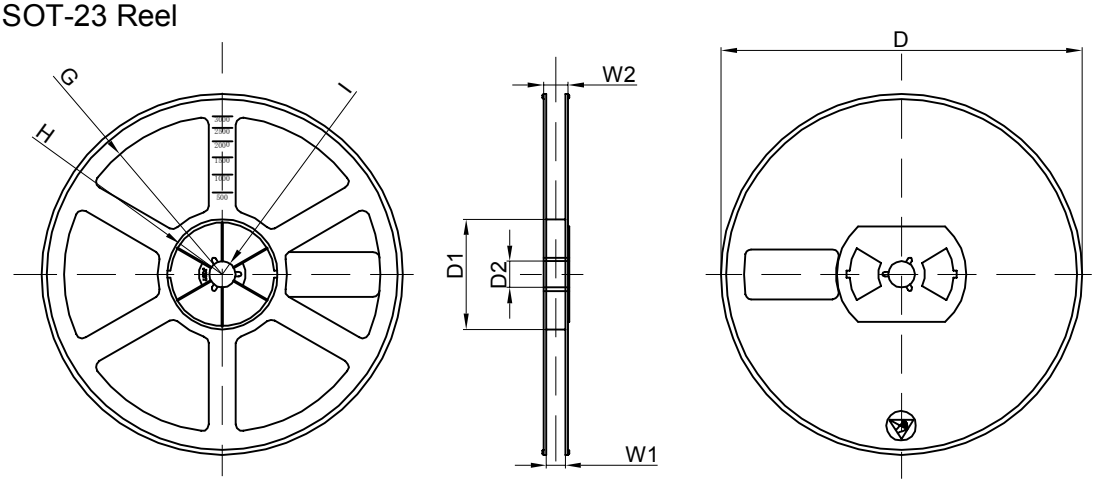


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	45,000 pcs	192×192×193	180,000 pcs	404×404×214	