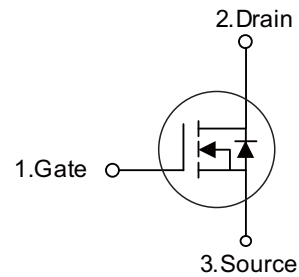


■ PRODUCT CHARACTERISTICS

VDSS	30V
$R_{DS(on)Typ}(V_{GS} @=4.5V)$	22mΩ
$R_{DS(on)Typ}(V_{GS} @=2.5V)$	24mΩ
ID	5.8

Symbol

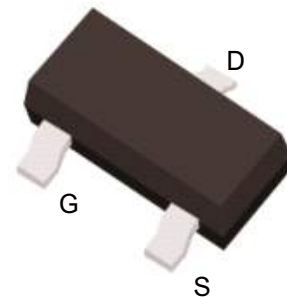


■ APPLICATIONS

Load/Power Switching
Interfacing Switching

■ FEATURES

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



■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
N/A	MOT3400	SOT-23	3000pieces/Real

■ ABSOLUTE MAXIMUM RATINGS ($T_C = 25^{\circ}C$ 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 (note 1)	I_{DM}	30	A
Power Dissipation	P_D	350	mW
Thermal Resistance from Junction to Ambient (note 2)	$R_{\theta JA}$	357	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}C$

■ ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$, unless otherwise specified)

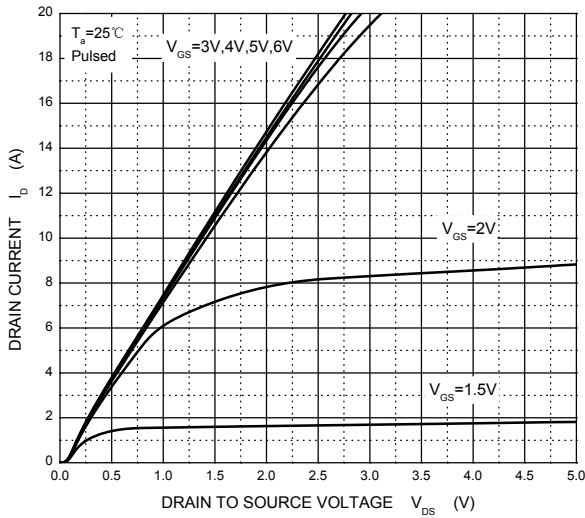
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30	-	-	V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 24V, V_{GS} = 0V$	-	-	1	μA
Gate-source leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$	-	-	± 100	nA
On characteristics						
Drain-source on-resistance (note 3)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 5.8A$	-	22	30	m Ω
		$V_{GS} = 4.5V, I_D = 5A$	-	24	30	m Ω
		$V_{GS} = 2.5V, I_D = 4A$	-	31	40	m Ω
Forward transconductance	g_{FS}	$V_{DS} = 5V, I_D = 5A$	8	-	-	S
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.7	-	2.0	V
Dynamic Characteristics (note 4,5)						
Input capacitance	C_{iss}	$V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$	-	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 (note 4,5)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10V, V_{DS} = 15V,$ $R_L = 2.7\Omega, R_{GEN} = 3\Omega$	-	5	-	ns
Turn-on rise time	t_r		-	7	-	ns
Turn-off delay time	$t_{d(off)}$		-	40	-	ns
Turn-off fall time	t_f		-	6	-	ns
Drain-source diode characteristics and maximum ratings						
Diode forward voltage (note 3)	V_{SD}	$I_S = 2.9A, V_{GS} = 0V$	-	-	1	V

Note :

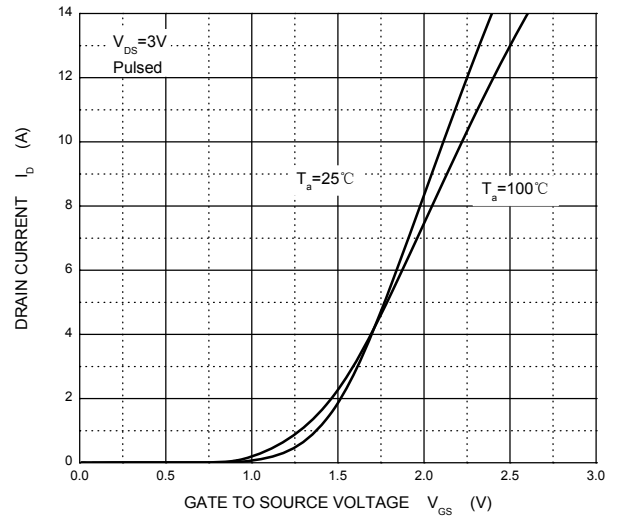
1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, $t < 5$ sec.
3. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production testing.

■ TYPICAL CHARACTERISTICS

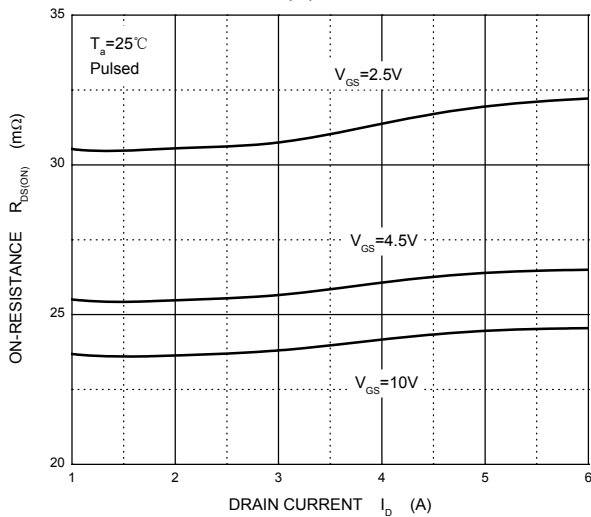
Output Characteristics



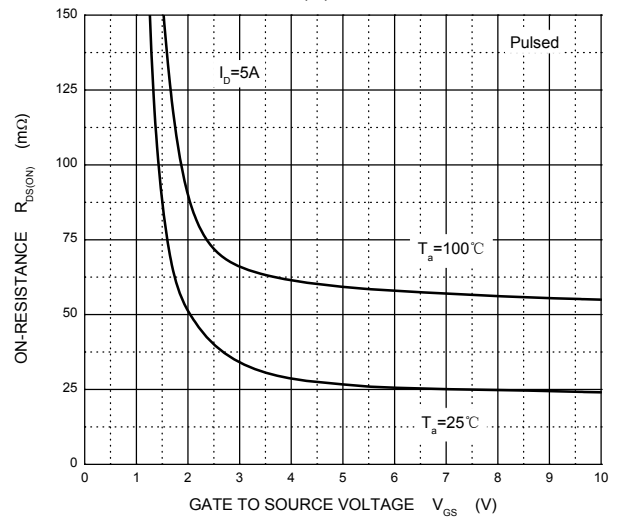
Transfer Characteristics



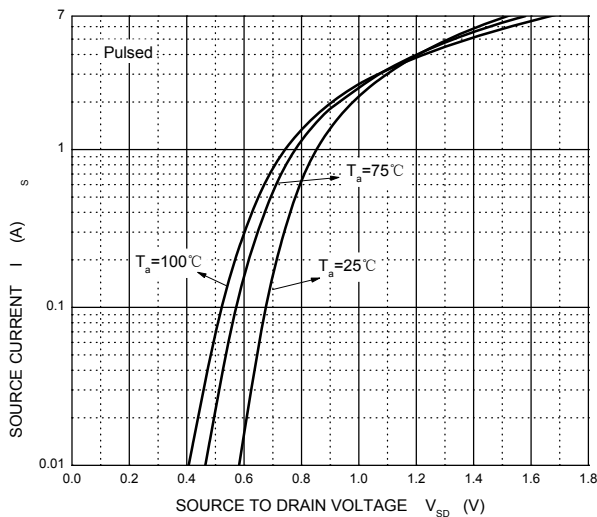
$R_{DS(ON)}$ — I_D



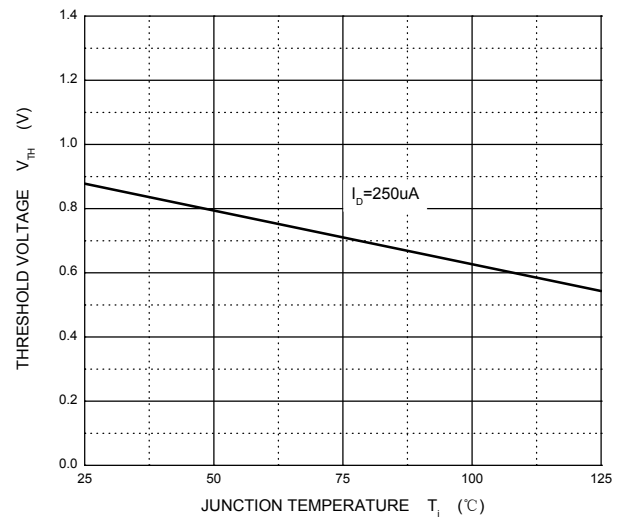
$R_{DS(ON)}$ — V_{GS}



I_s — V_{SD}

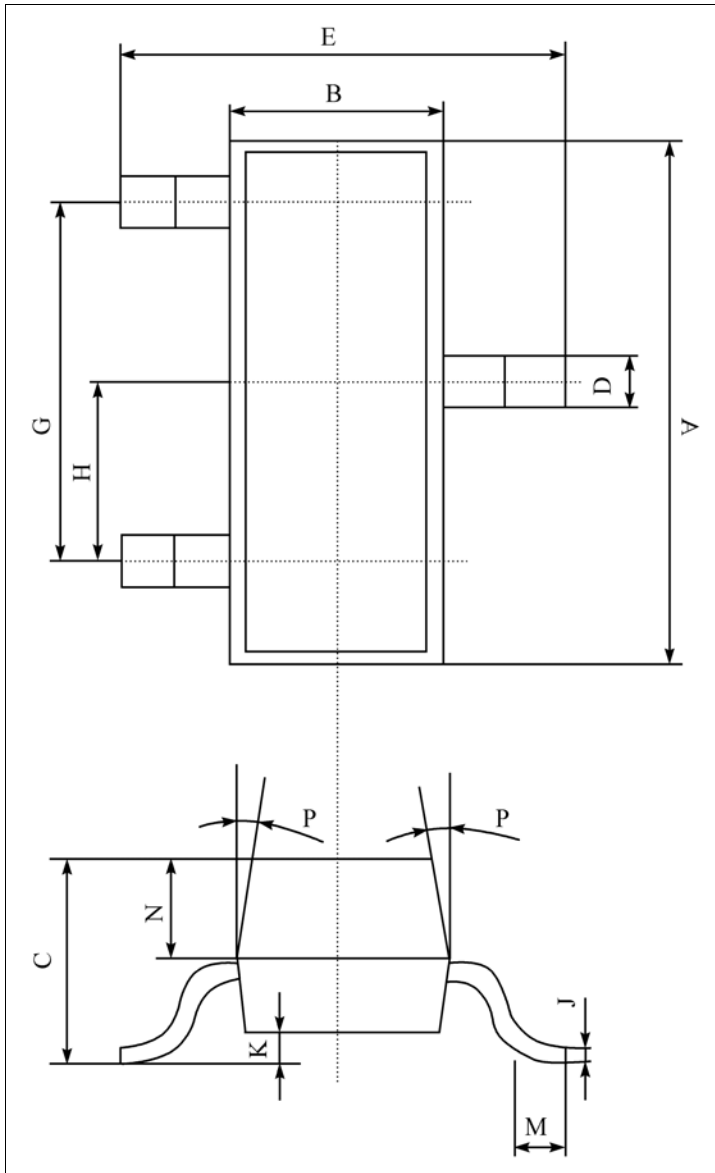


Threshold Voltage



■ SOT-23-3L PACKAGE OUTLINE DIMENSIONS

单位 (UNIT) : mm

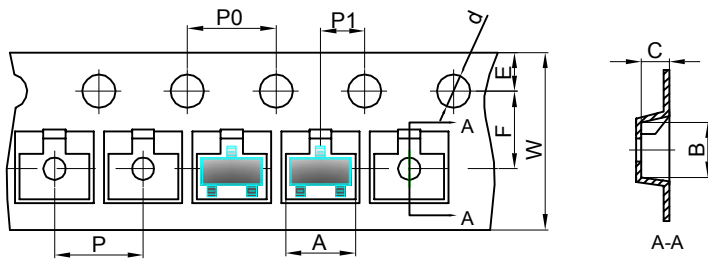


序号	数值及公差
A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.20
N	0.60±0.10
P	7±2°

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)

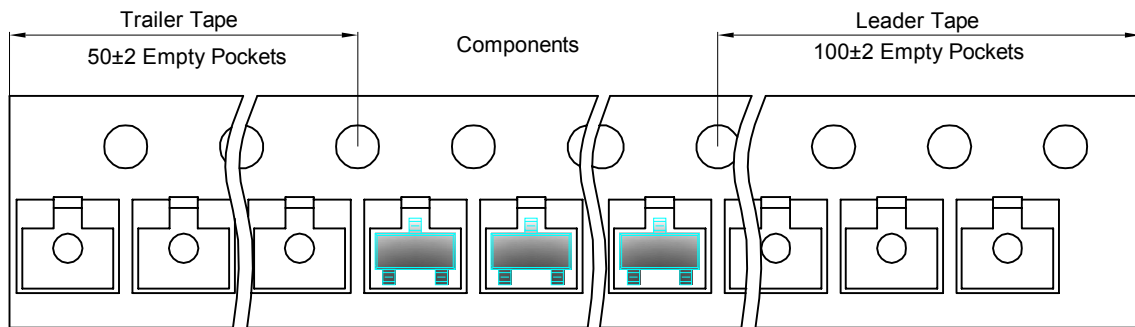
SOT-23 Tape and reel

SOT-23 Embossed Carrier Tape

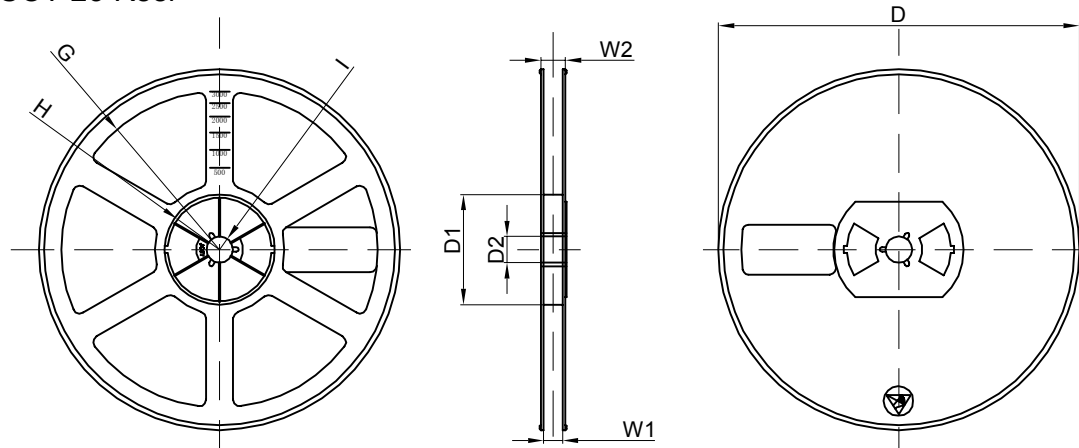


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	

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