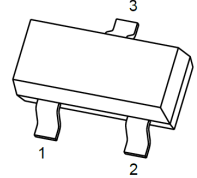


SOT-23 Plastic-Encapsulate MOSFETS

CJ3134KA N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$ TYP	I_D
20V	110mΩ@4.5V	0.9A
	140mΩ@2.5V	
	180mΩ@1.8V	

SOT-23



1. GATE
2. SOURCE
3. DRAIN

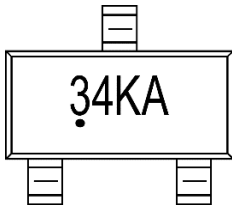
FEATURE

- Lead Free Product is Acquired
- Surface Mount Package
- N-Channel Switch with Low $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive

APPLICATIONS

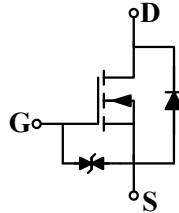
- Load/Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

MARKING



34KA= Device code
Solid dot = Green molding compound device.

EQUIVALENT CIRCUIT



Maximum ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	20	V
Typical Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	$I_{D(1)}$	0.9	A
Pulsed Drain Current	$I_{DM(2)}$	2	A
Power Dissipation	$P_{D(3)}$	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA(4)}$	357	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^\circ\text{C}$
Lead Temperature for Soldering Purposes(1/8" duration for 10s)	T_L	260	$^\circ\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

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

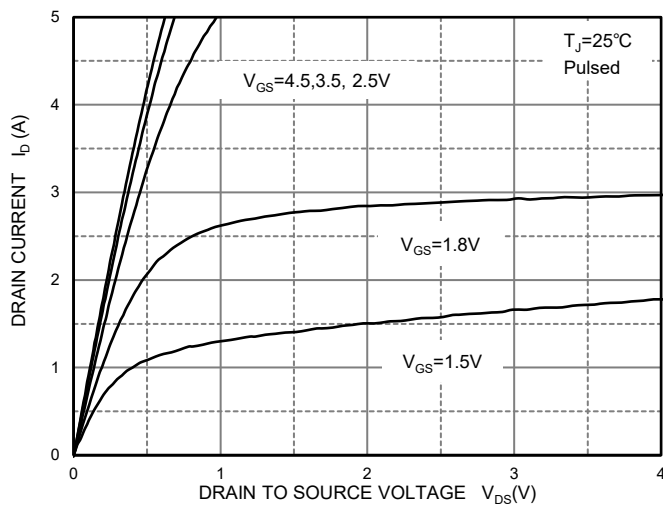
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	V _{(BR) DSS}	V _{GS} =0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} =0V			±20	μA
Gate-threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.4	0.7	1.1	V
Drain-source on-state resistance	R _{DS(on)} ®	V _{GS} =4.5V, I _D =0.65A		110	170	mΩ
		V _{GS} =2.5V, I _D =0.55A		140	200	mΩ
		V _{GS} =1.8V, I _D =0.45A		180	300	mΩ
Diode forward voltage	V _{SD} ®	I _S =0.15A, V _{GS} =0V			1.2	V
DYNAMIC CHARACTERISTICS®						
Input capacitance	C _{iss}	V _{DS} =16V, V _{GS} =0V, f =1MHz		45		pF
Output capacitance	C _{oss}			12		
Reverse transfer capacitance	C _{rss}			8		
SWITCHING CHARACTERISTICS®						
Turn-on delay time	t _{d(on)}	V _{GS} =4.5V, V _{DS} =10V, I _D =500mA, R _{GEN} =10Ω		10		ns
Turn-on rise time	t _r			20		
Turn-off delay time	t _{d(off)}			100		
Turn-off fall time	t _f			60		

Notes:

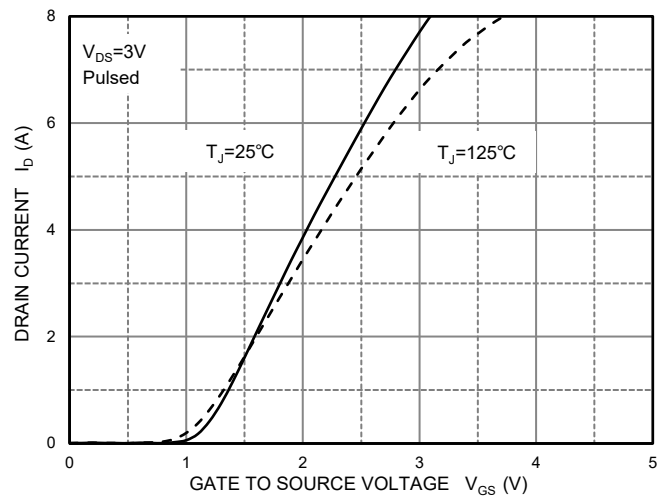
- Limited only by maximum temperature allowed.
- $P_W \leq 10\mu s$. Limited only by maximum temperature allowed.
- Pulse Test : Pulse Width $\leq 400\mu s$, duty cycle $\leq 2\%$.
- Guaranteed by design, not subject to production.
- The value of $R_{\theta JA}$ is measured with the device mounted on 1 in² FR-4 board with 2oz. single-sided Copper, in a still air environment with $T_a=25^{\circ}\text{C}$.

Typical Characteristics

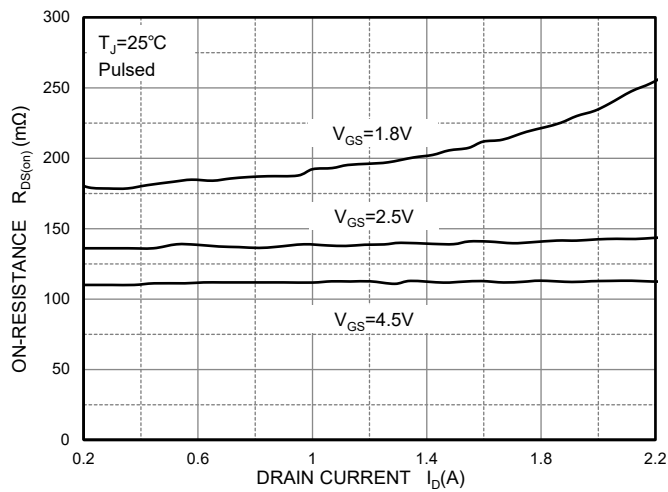
Output Characteristics



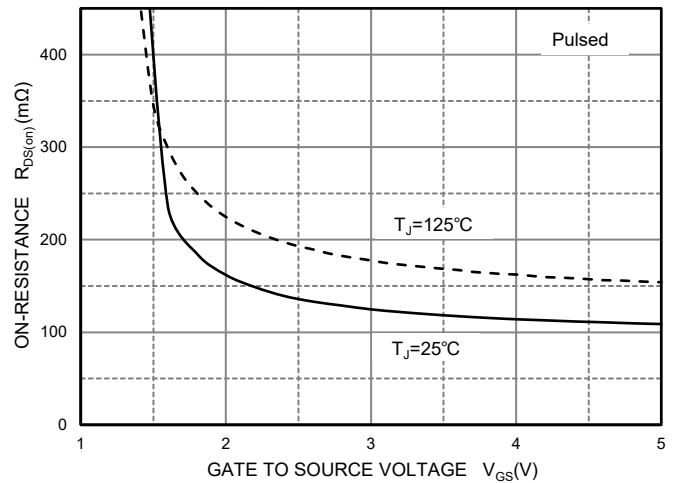
Transfer Characteristics



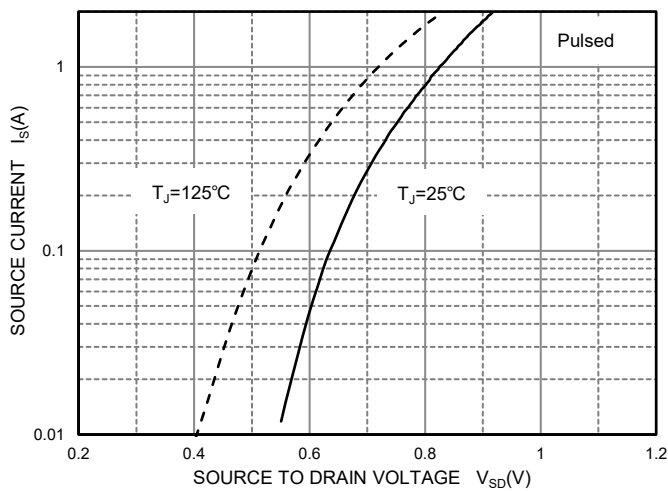
On Resistance vs. Drain Current



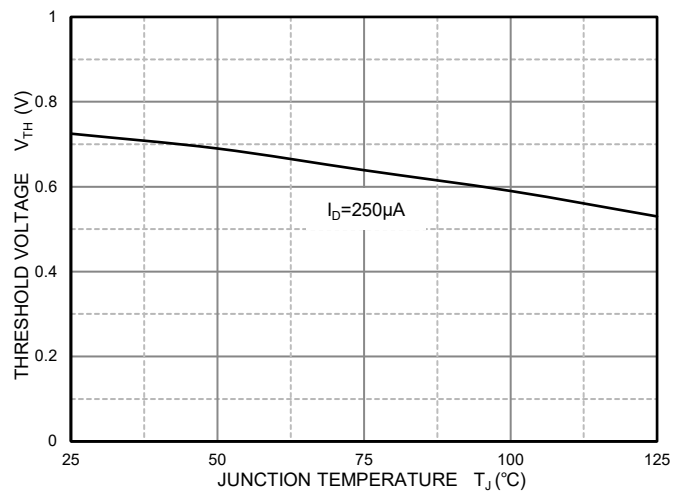
On Resistance vs. Gate-Source Bias



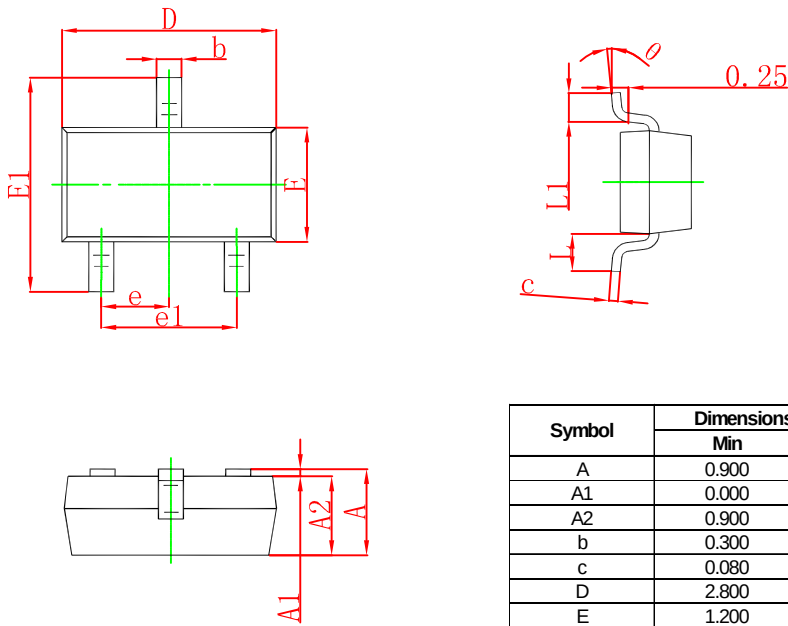
Source-Drain Diode Forward Characteristics



Threshold Voltage vs. Temperature

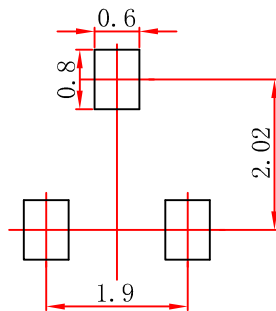


SOT-23 Package Outline Dimensions



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



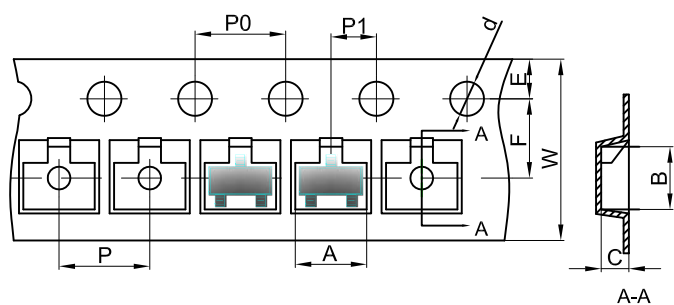
Note:

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

NOTICE

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

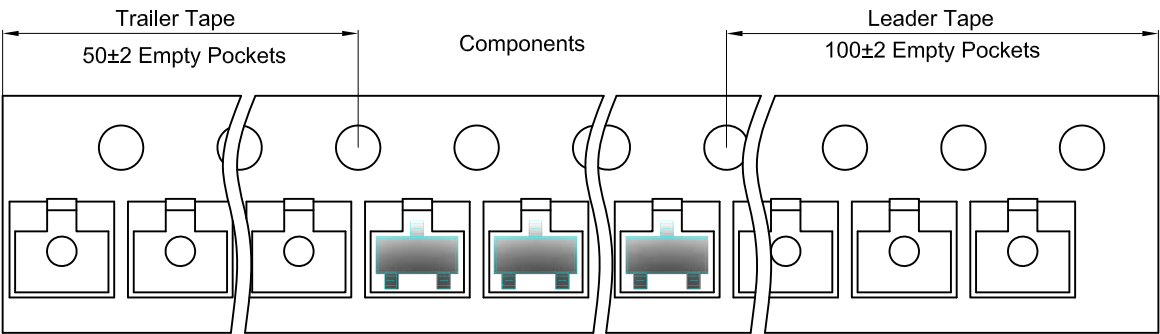
SOT-23 Embossed Carrier Tape



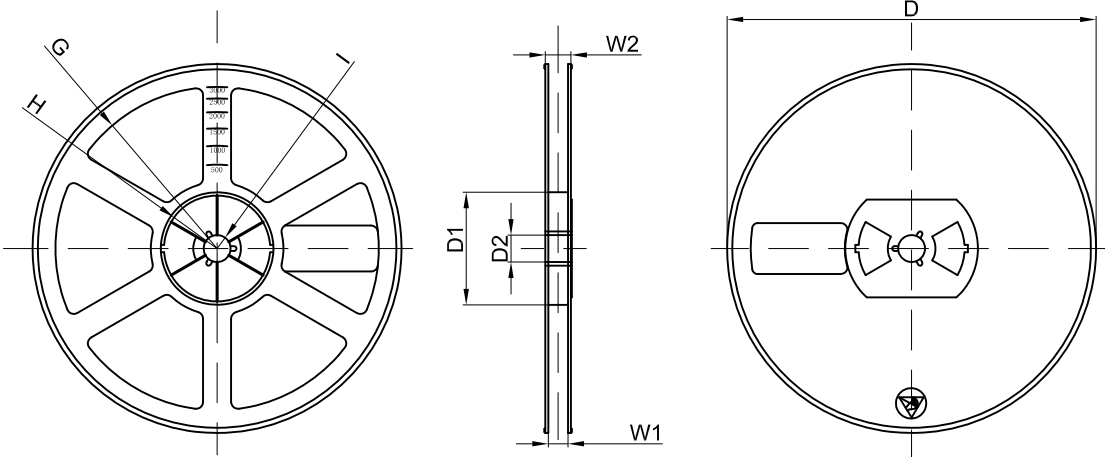
Packaging Description:
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. 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	45,000 pcs	203×203×195	180,000 pcs	438×438×220	