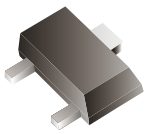
MOSFET

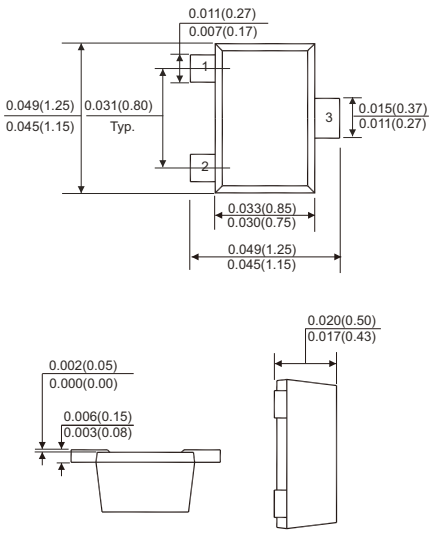
CJ3134K-HF

N-Channel
RoHS Device
Halogen Free



$V_{(BR)DSS}$	$R_{DS(ON)}$MAX	I_D
20V	380mΩ@4.5V	0.75A
	450mΩ@2.5V	
	800mΩ@1.8V	

SOT-723



Dimensions in inches and (millimeter)

Features

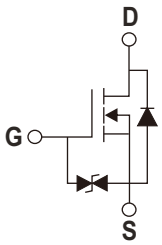
- Lead free product is acquired.
- Surface mount package.
- N-Channel switch with low R_{DS}(on).
- Operated at low logic level gate drive.

Mechanical data

- Case: SOT-723, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram

1. G : Gate
2. S : Source
3. D : Drain



Maximum Rating (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DS}	20	V
Typical Gate-Source voltage	V_{GS}	±12	V
Continuous drain current (Note 1)	I_D	0.75	A
Pulsed drain current (tp=10μs)	I_{DM}	1.8	
Power dissipation (Note 1)	P_D	150	mW
Thermal resistance from junction to ambient (Note 1)	$R_{\Theta JA}$	833	°C/W
Junction temperature	T_J	150	°C
Storage temperature	T_{STG}	-55 to +150	°C
Lead temperature for soldering purposes (1/8" from case for 10 s)	T_L	260	°C

Notes: 1. Surface mounted on FR4 board using the minimum recommended pad size.

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Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	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 (Note 2)	$V_{GS(th)}$	V_{DS} =V_{GS} , I_D=250μA	0.35	0.54	1.1	V
Drain-source on-state resistance (Note 2)	$R_{DS(on)}$	V_{GS}=4.5V , I_D=0.65A		270	380	mΩ
		V_{GS}=2.5V , I_D=0.55A		320	450	
		V_{GS}=1.8V , I_D=0.45A		390	800	
Forward transconductance (Note 2)	g_{FS}	V_{DS}=10V , I_D=0.8A		1.6		S
Diode forward voltage	V_{SD}	I_S=0.15A , V_{GS}=0V			1.2	V
Dynamic Characteristics (Note 4)						
Input capacitance	C_{iss}	V_{DS}=16V , V_{GS}=0V, f=1MHz		79	120	pF
Output capacitance	C_{oss}			13	20	
Reverse transfer capacitance	C_{rss}			9	15	
Switching Characteristics (Note 4)						
Turn-on delay time (Note 3)	$t_{d(on)}$	V_{GS}=4.5V , V_{DS}=10V I_D=500mA , R_{GEN}=10Ω		6.7		nS
Turn-on rise time (Note 3)	t_r			4.8		
Turn-off delay time (Note 3)	$t_{d(off)}$			17.3		
Turn-off fall time (Note 3)	t_f			7.4		

Notes: 1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse test: Pulse width=300μs, Duty cycle=2%
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producting.

Rating and Characteristic Curves (CJ3134K-HF)

Fig.1 - Output Characteristics

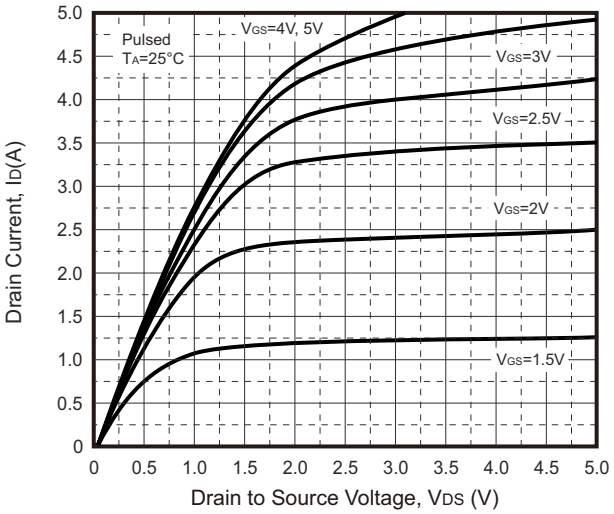


Fig.2 - Transfer Characteristics

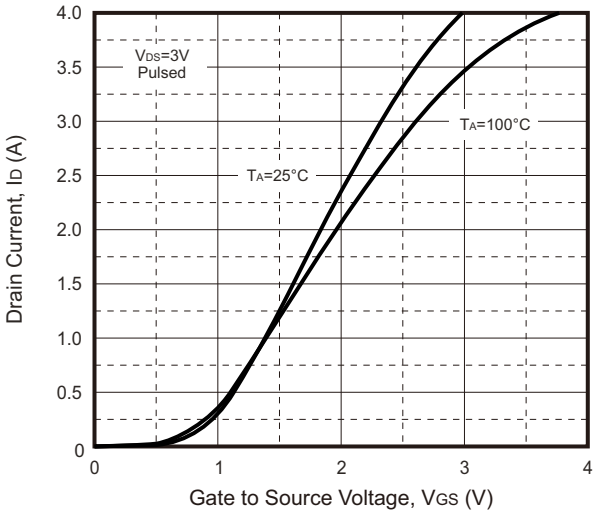


Fig.3 - RDS(ON) — ID

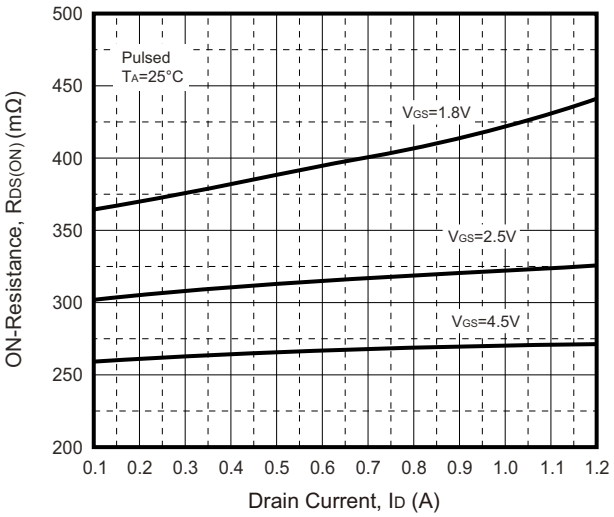


Fig.4 - RDS(ON) — VGS

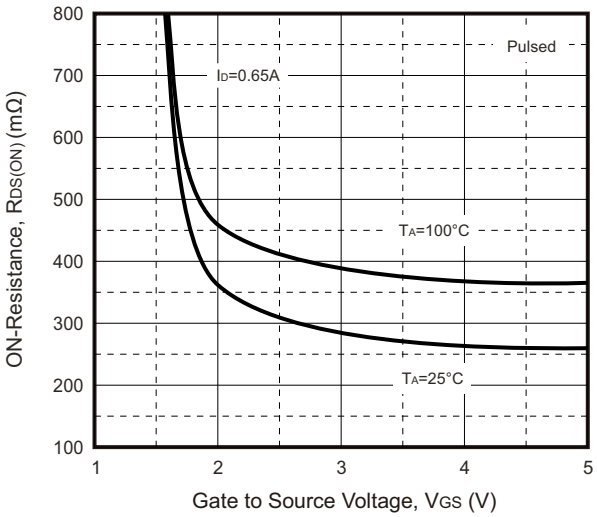


Fig.5 - IS — VSD

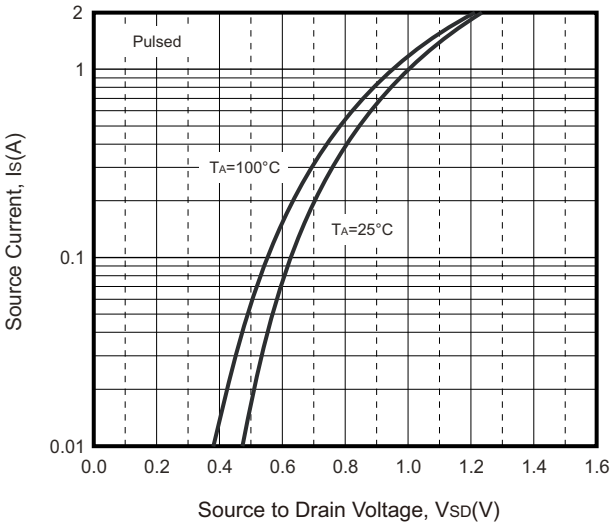
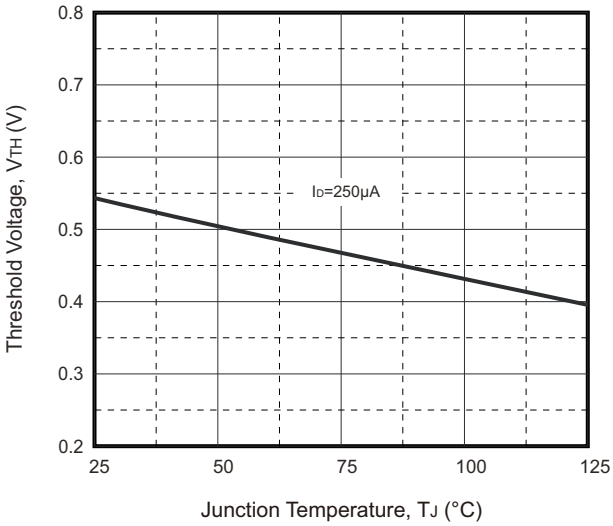
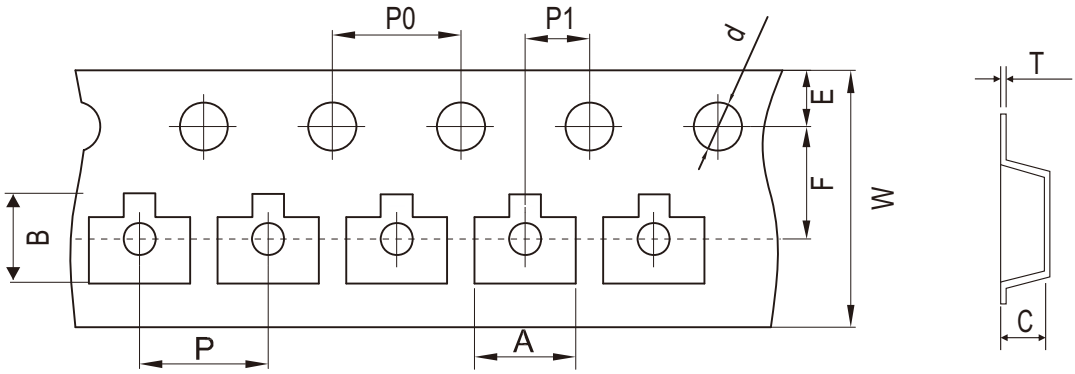


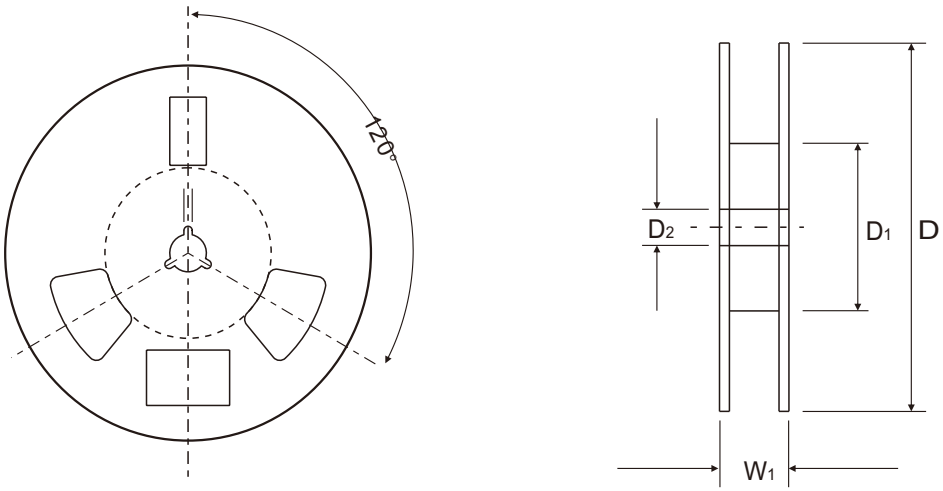
Fig.6 - Threshold Voltage

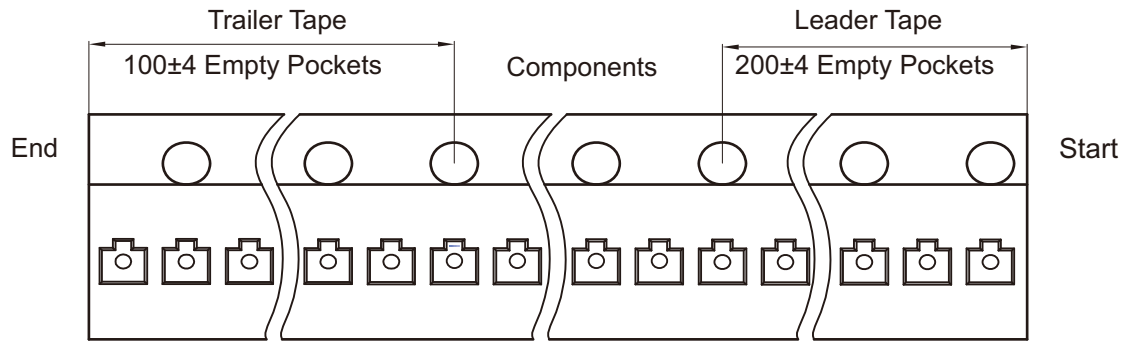


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Reel Taping Specification







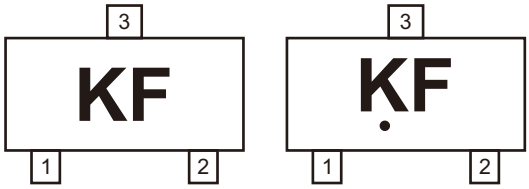
	SYMBOL	A	B	C	d	D	D1	D2
SOT-723	(mm)	1.33 ± 0.05	1.45 ± 0.05	0.61 ± 0.05	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.052 ± 0.002	0.057 ± 0.002	0.024 ± 0.002	0.059 + 0.004	7.008 ± 0.078	2.142 ± 0.039	0.512 ± 0.039

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-723	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

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

Marking Code

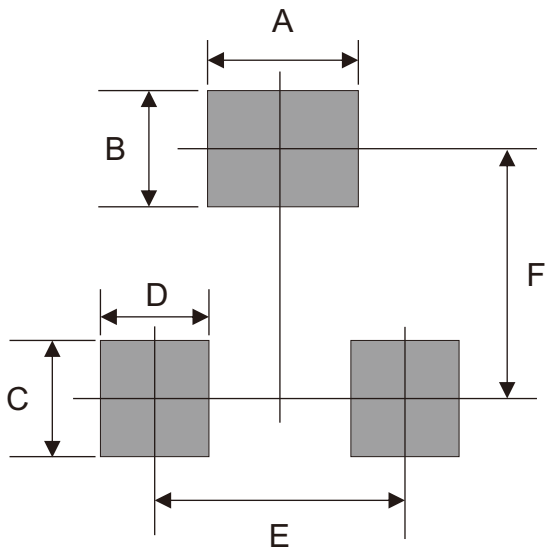
Part Number	Marking Code
CJ3134K-HF	KF



Solid dot = Control code

Suggested P.C.B. PAD Layout

SIZE	SOT-723	
	(mm)	(inch)
A	0.42	0.017
B	0.30	0.012
C	0.30	0.012
D	0.32	0.013
E	0.80	0.031
F	1.00	0.039



Note: 1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-723	8,000	7

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