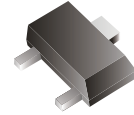


MOSFET

CJ3134K-HF

N-Channel
RoHS Device
Halogen Free



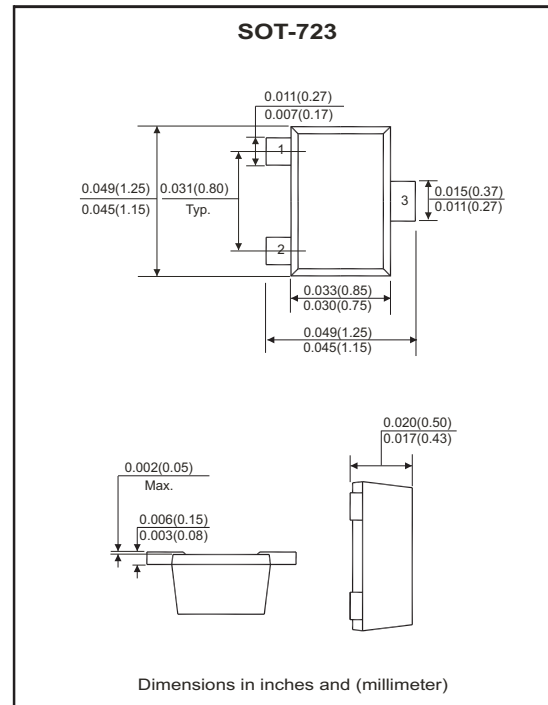
$V_{(BR)DSS}$	$R_{DS(ON)MAX}$	I_D
20V	380m Ω @4.5V	0.75A
	450m Ω @2.5V	
	800m Ω @1.8V	

Features

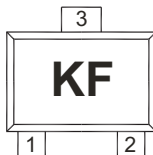
- Lead free product is acquired
- Surface mount package
- N-Channel switch with low $R_{DS(on)}$
- Operated at low logic level gate drive

Mechanical data

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

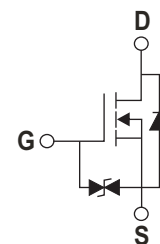


Marking: KF



Circuit Diagram

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



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

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DS}	20	V
Gate-Source voltage	V_{GS}	± 12	V
Continuous drain current (note1)	I_D	0.75	A
Pulsed drain current ($t_p=10\mu\text{s}$)	I_{DM}	1.8	
Power dissipation (note1)	P_D	150	mW
Thermal resistance from junction to ambient (note1)	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Junction temperature range	T_J	150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Lead temperature for soldering purposes (1/8" from case for 10 s)	T_L	260	$^{\circ}\text{C}$

Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ 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} =±12V , V _{DS} =0V			±50	μA
Gate-threshold voltage (note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35		1	V
Drain-source on-state resistance (note 2)	R _{DS(on)}	V _{GS} =4.5V , I _D =0.65A			380	mΩ
		V _{GS} =2.5V , I _D =0.55A			450	
		V _{GS} =1.8V , I _D =0.45A			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=300 μs , Duty cycle=2%
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.

RATING AND CHARACTERISTIC CURVES (CJ3134K-HF)

Fig.1 - Output Characteristics

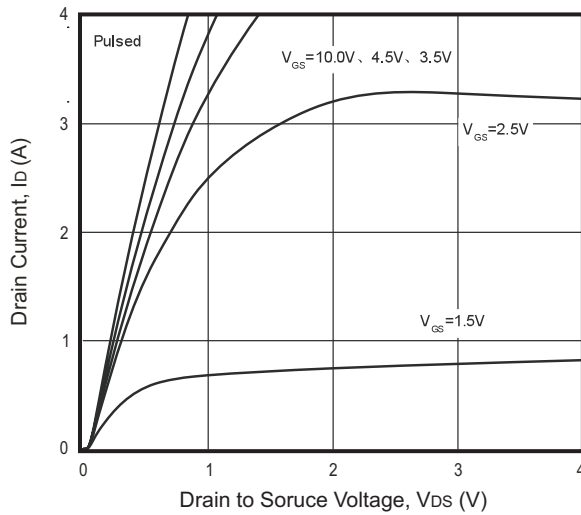


Fig.2 - Transfer Characteristics

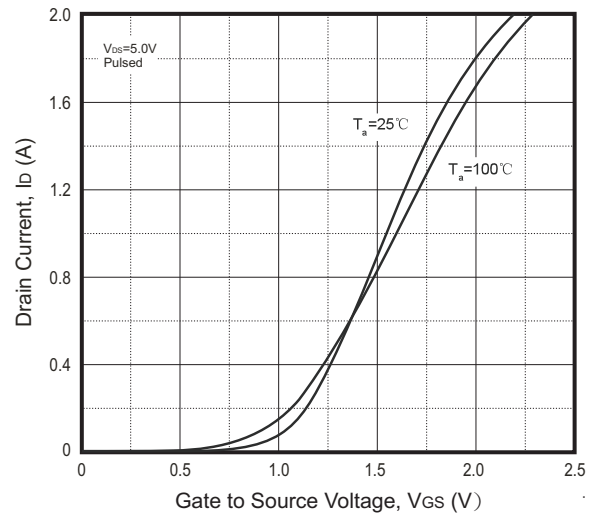


Fig.3 - $R_{DS(ON)}$ — I_D

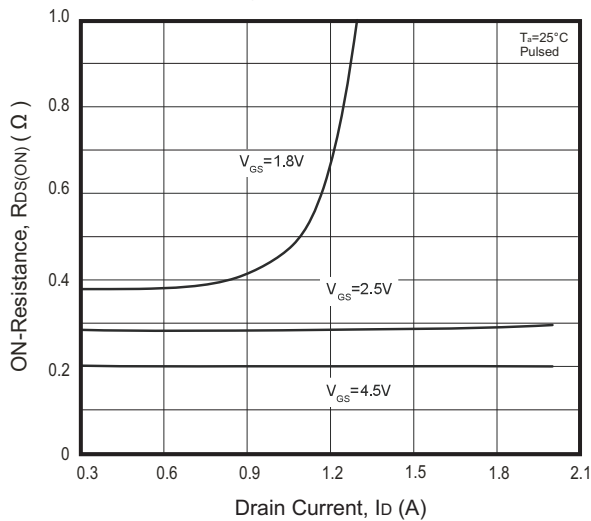


Fig.4 - $R_{DS(ON)}$ — V_{GS}

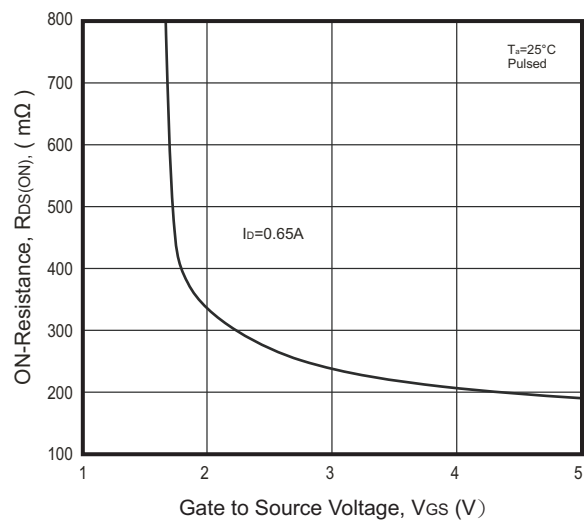


Fig.5 - I_S — V_{SD}

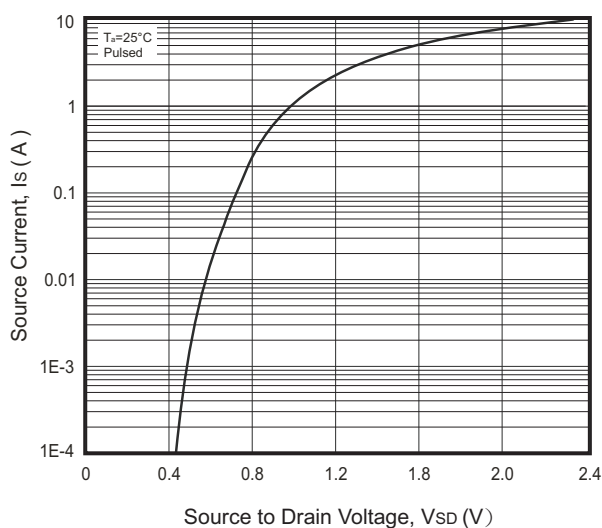
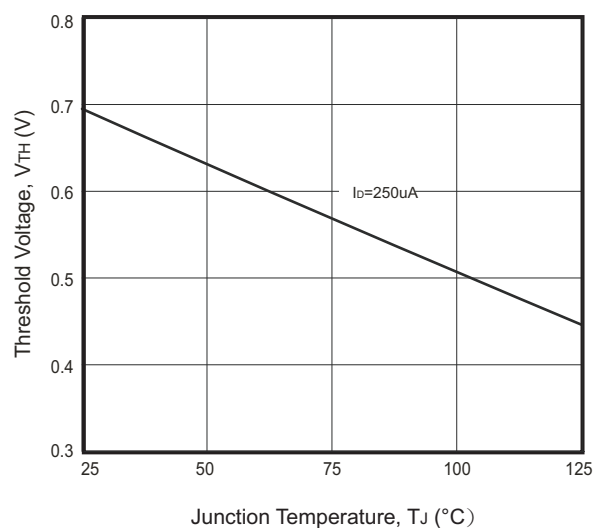
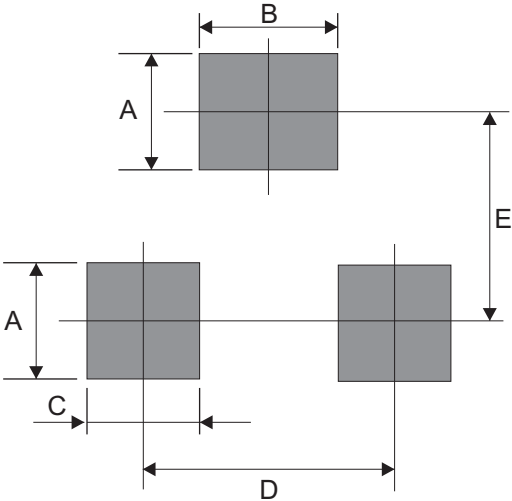


Fig.6 - Threshold Voltage



Suggested PAD Layout

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



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
SOT-723	8,000	7