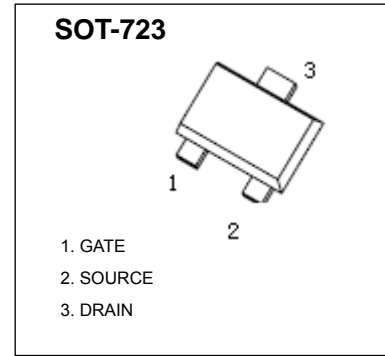




SOT-723 Plastic-Encapsulate MOSFETS

CJ3134K N-Channel MOSFET

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



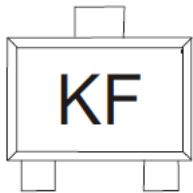
FEATURES

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

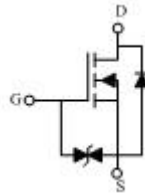
APPLICATION

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

MARKING



Equivalent Circuit



Maximum ratings ($T_a=25^\circ\text{C}$ 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 ($t_p=10\ \mu\text{s}$)	I_{DM}	1.8	A
Power Dissipation (note 1)	P_D	150	mW
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^\circ\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

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

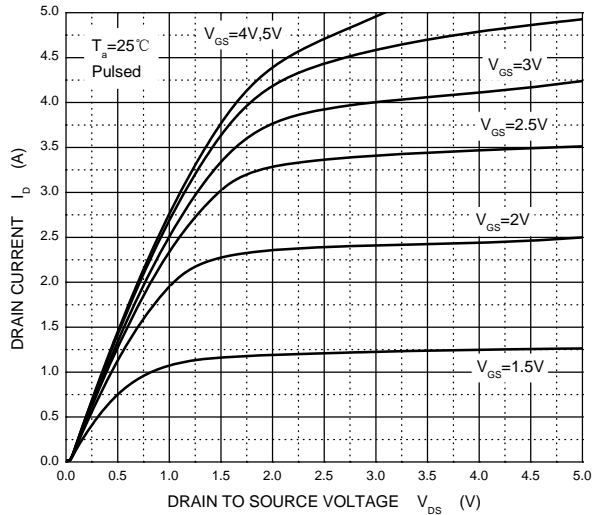
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 20	μA
Gate threshold voltage (note 2)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.35	0.54	1.1	V
Drain-source on-resistance (note 2)	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 0.65A$		270	380	m Ω
		$V_{GS} = 2.5V, I_D = 0.55A$		320	450	m Ω
		$V_{GS} = 1.8V, I_D = 0.45A$		390	800	m Ω
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	pF
Reverse transfer capacitance	C_{rss}			9	15	pF
SWITCHING CHARACTERISTICS (note 4)						
Turn-on delay time (note 3)	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V,$ $I_D = 500mA, R_{GEN} = 10\Omega$		6.7		ns
Turn-on rise time (note 3)	t_r			4.8		ns
Turn-off delay time (note3)	$t_{d(off)}$			17.3		ns
Turn-off fall time (note 3)	t_f			7.4		ns

Notes :

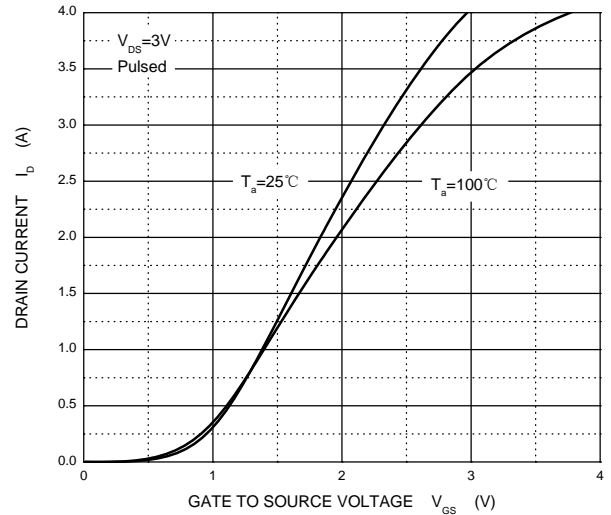
1. Surface mounted on FR4 board using the minimum recommended pad size.
2. Pulse Test : Pulse Width=300 μs , Duty Cycle=2%.
3. Switching characteristics are independent of operating junction temperatures.
4. Guaranteed by design, not subject to producing.

Typical Characteristics

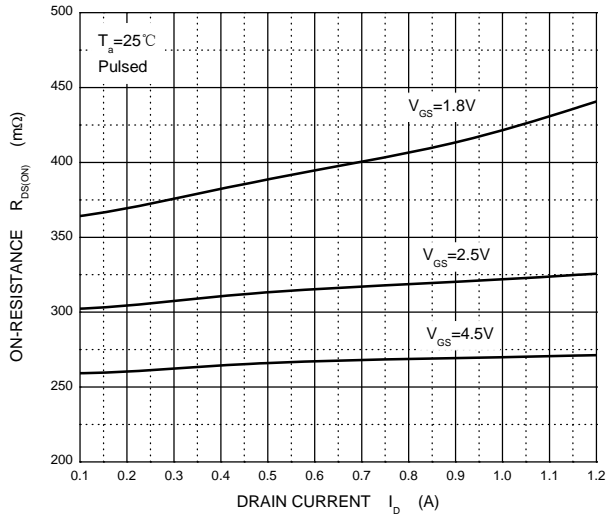
Output Characteristics



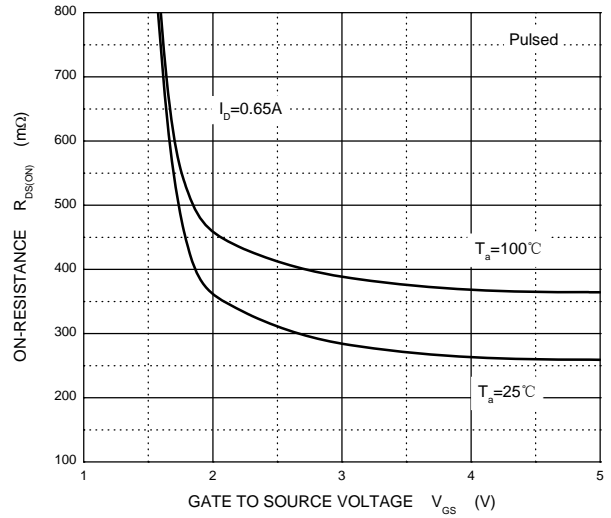
Transfer Characteristics



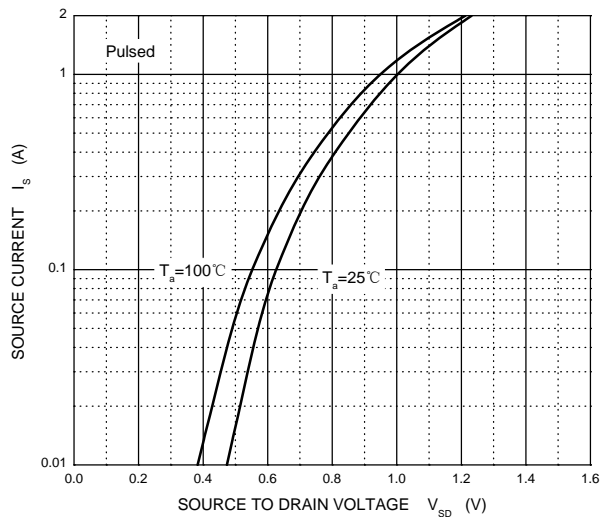
$R_{DS(ON)}$ — I_D



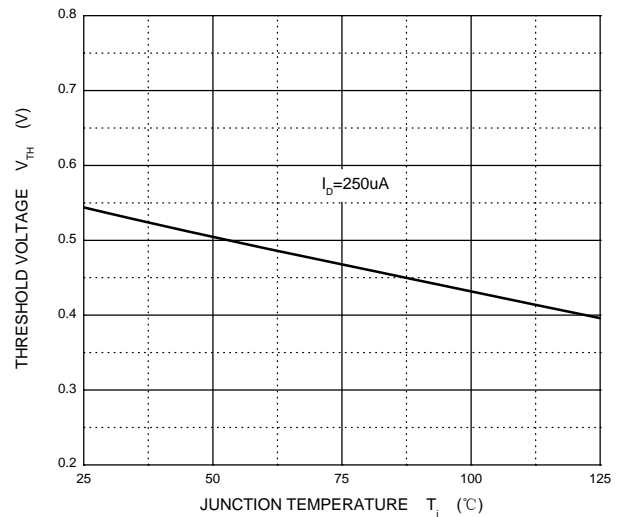
$R_{DS(ON)}$ — V_{GS}



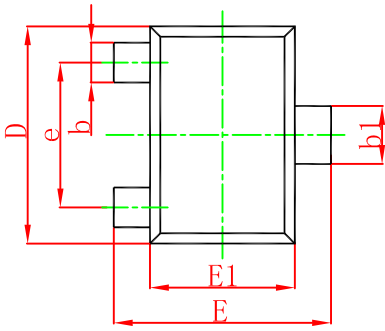
I_S — V_{SD}



Threshold Voltage

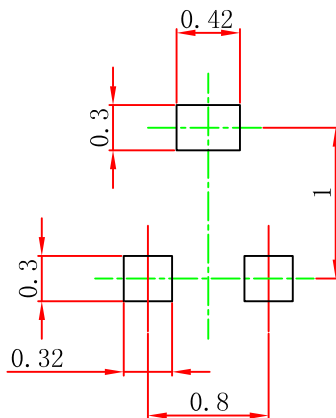


SOT-723 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

SOT-723 Suggested Pad Layout



Note:

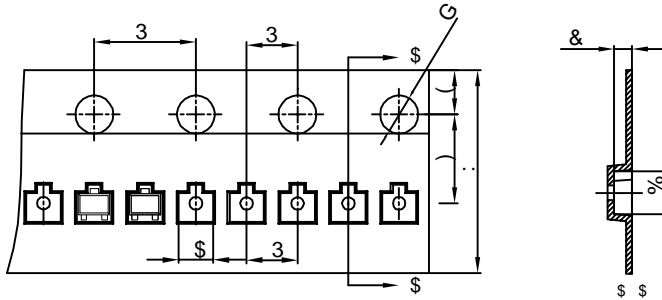
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

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

6 2 7 7 D S H D Q G U H H O

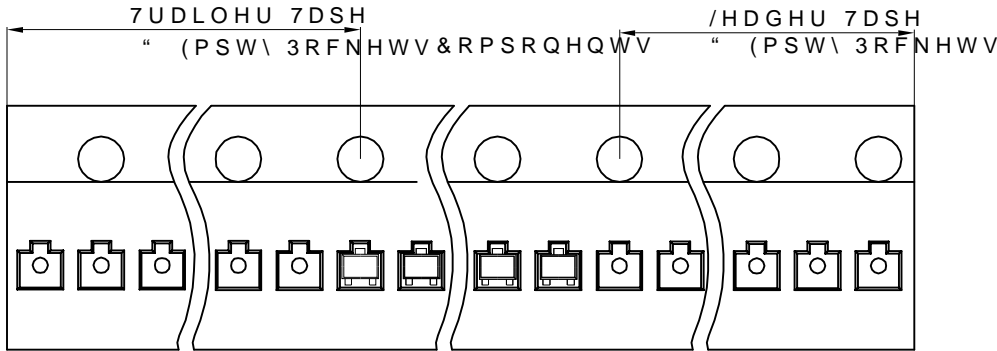
6 2 7 (P E R V V H G & D U U L H U 7 D S H



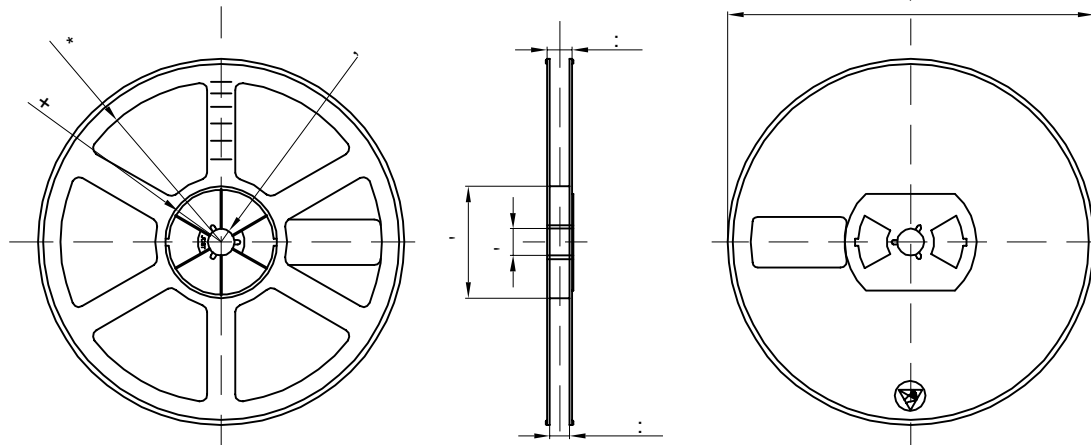
3DFNDJLQJ 'HVFULSWLRQ
 627 SDUVV DUH VKLSSHG LQ WD
 WDSH LV PDGH IURP D GLVVLSDWLYH FD
 SRO\FDUERQDWH UHVLQ 7KH FRYHU WD
 ILOP +HDW \$FWLYDWHG \$GKHVLYH LQ Q
 FRPSRVHG RI SRO\HVWHU ILOP DGKHVLY
 DQG DQWL VWDWLF VSUD\HG DJHQW 7K
 VWDQGDUG RSWLRQ DUH VKLSSHG ZLWK
 RU FP GLDPHWHU UHHO 7KH UHHOV D
 DQG LV PDGH RI SRO\VV\UHQH SODVWLF
 FRDWHG

'LPHQVLRQV DUH LQ PLOOLPHWHU										
3NJ W\SH	\$	%	&	G	()	3	3	3	:
627										

6 2 7 7 D S H / H D G H U D Q G 7 U D L O H U



6 2 7 5 H H O



'LPHQVLRQV DUH LQ PLOOLPHWHU									
5HHO 2SWLRQ				*	+	,	:	:	
'LD				5	5	5			

5((/	5HHO 6L]H	%R[%R[6L]H	PP & DUWRQ	& DUWRQ	6L]H*	P.P.NJ		
SFV	LQFK	SFV	î î	SFV	î î				