JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-323 Plastic-Encapsulate MOSFETS

CJ3134KW   N-Channel MOSFET

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

SOT-323

1. GATE
2. SOURCE
3. DRAIN
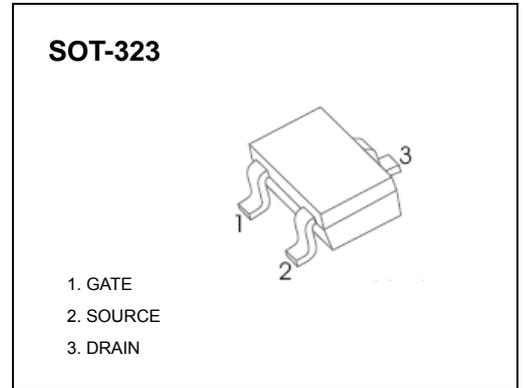
FEATURE

- High-Side Switching
- Low On-Resistance
- Low Threshold
- Fast Switching Speed

APPLICATION

- Drivers:Relays, Solenoids, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers

MARKING

34K

Equivalent Circuit
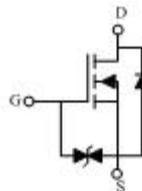
Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DSS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	
Drain Current-Continuous	I_D	0.75	A
Drain Current -Pulsed(note1)	I_{DM}	3	
Power Dissipation (note 2)	P_D	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	℃/W
Storage Temperature	T_j	150	℃
Junction Temperature	T_{stg}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

T$_a$=25℃ unless otherwise specified

| Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off States						
Drain-Source Breakdown Voltage	V$_{(BR)DSS}$	V$_{GS}$ = 0V, I$_D$ =250µA	20			V
Gate-Threshold Voltage(note 3)	V$_{GS(th)}$	V$_{DS}$ =V$_{GS}$, I$_D$ =250µA	0.35		1.1	
Gate-Body Leakage Current	I$_{GSS}$	V$_{DS}$ =0V, V$_{GS}$ =±10V			±20	µA
Zero Gate Voltage Drain Current	I$_{DSS}$	V$_{DS}$ =20V, V$_{GS}$ =0V			1	µA
Drain-Source On-State Resistance(note 3)	R$_{DS(on)}$	V$_{GS}$ =4.5V, I$_D$ =650mA			380	mΩ
		V$_{GS}$ =2.5V, I$_D$ =550mA			450	
		V$_{GS}$ =1.8V, I$_D$ =450mA			800	
Forward Transconductance	g$_{FS}$	V$_{DS}$ =10V, I$_D$ =800mA	1			S
Dynamic Characteristics(note 4)						
Input Capacitance	C$_{iss}$	V$_{DS}$ =16V,V$_{GS}$ =0V,f =1MHz			120	pF
Output Capacitance	C$_{oss}$				20	
Reverse Transfer Capacitance	C$_{rss}$				15	
Switching Times (note 4)						
Turn-On Delay Time	t$_{d(on)}$	V$_{DD}$=10V,I$_D$=500mA, V$_{GS}$=4.5V,R$_G$=10Ω		6.7		ns
Rise Time	t$_r$			4.8		
Turn-Off Delay Time	t$_{d(off)}$			17.3		
Fall Time	t$_f$			7.4		
Drain-Source Diode Characteristics						
Drain-Source Diode Forward Voltage (note 3)	V$_{SD}$	I$_S$=0.15A, V$_{GS}$ = 0V			1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. This test is performed with no heat sink at T$_a$=25℃.

3. Pulse Test : Pulse Width≤300µs, Duty Cycle≤0.5%.

4. These parameters have no way to verify.

# Typical Characteristics

Output Characteristics
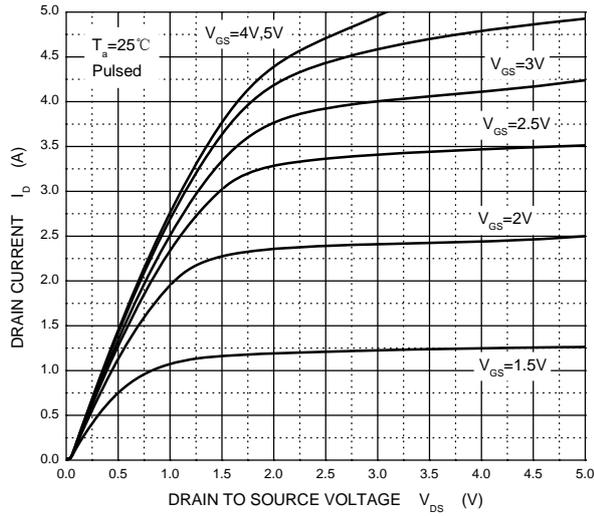
### Transfer Characteristics
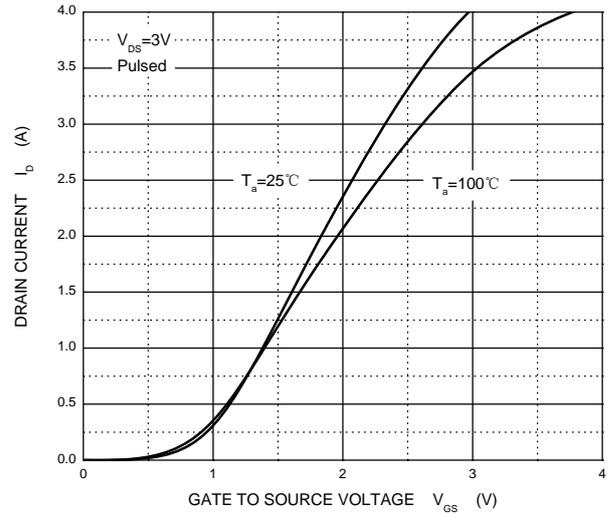
### $R_{DS(ON)}$ — I_D
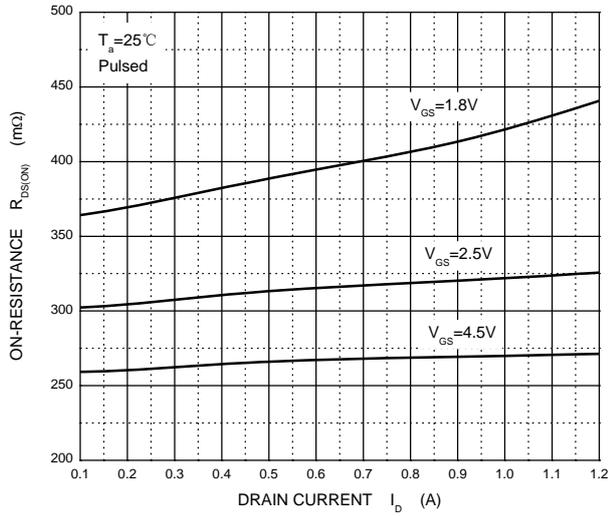
$R_{DS(ON)}$ — V_{GS}
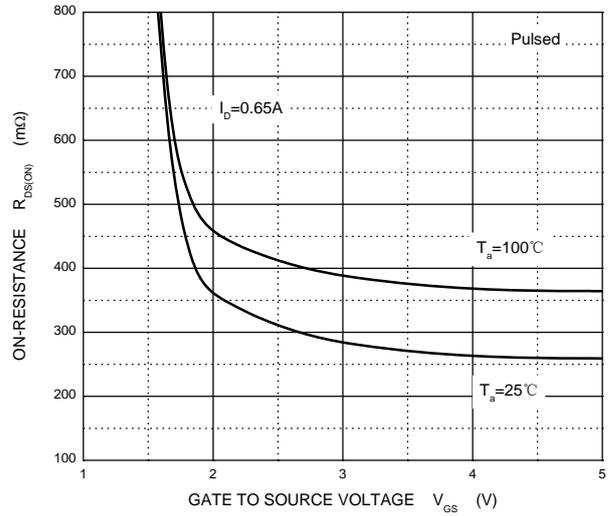
I_S — V_{SD}
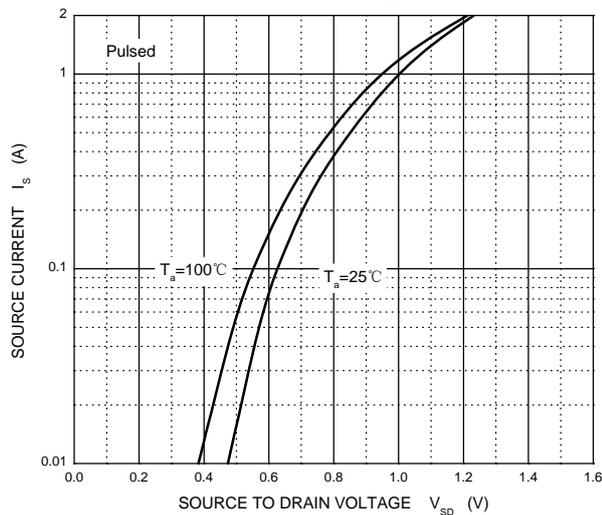
Threshold Voltage
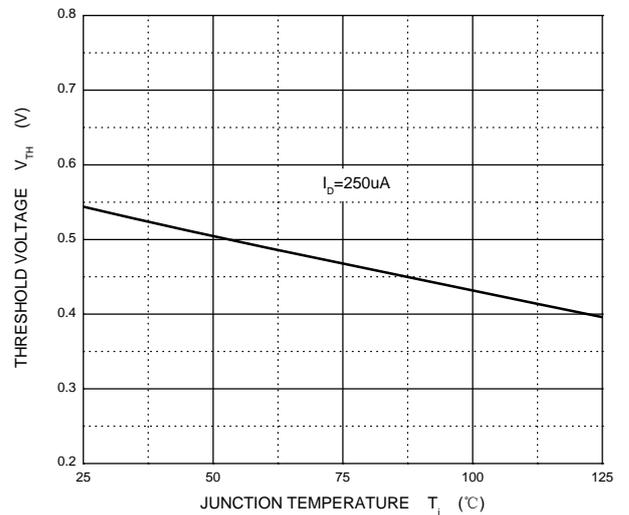
SOT-323 Package Outline Dimensions
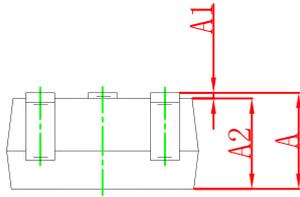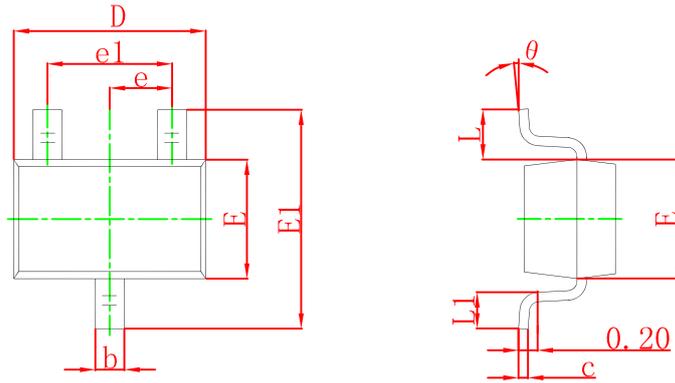
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout
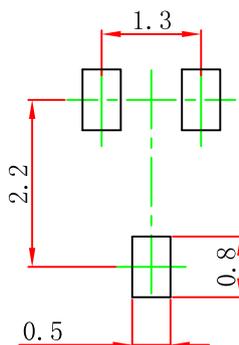
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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.

# 627   7DSH DQG UHHO

627   (PERVVHG &DUULHU 7DSH
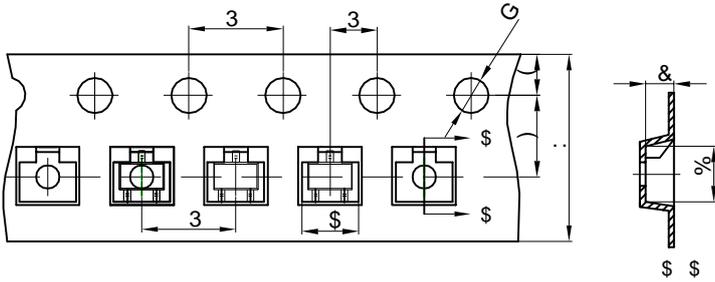
3DFNDJLQJ 'HVFULSWLRQ
627   SDUWV DUH VKLSSHG LQ WDS
WDSH LV PDGH IURP D GLVVLSDWLYH FDU
SRO\FDUERQDWH UHVLQ 7KH FRYHU WDS
ILOP +HDW $FWLYDWHG $GKHVLYH LQ QD
FRPSRVHG RI SRO\HVWHU ILOP DGKHVLY
DQG DQWL VWDWLF VSUD\HG DJHQW 7KH
VWDQGDUG RSWLRQ DUH VKLSSHG ZLWK
RU   FP GLDPHWHU UHHO 7KH UHHOV DU
DQG LV PDGH RI SRO\VW\UHQH SODVWLF
FRDWHG

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

627   7DSH /HDGHU DQG 7UDLOHU

7UDLOHU 7DSH
"   (PSW\ 3RFNHWV   &RPSRQHQWV   /HDGHU 7DSH
"   (PSW\ 3RFNHWV
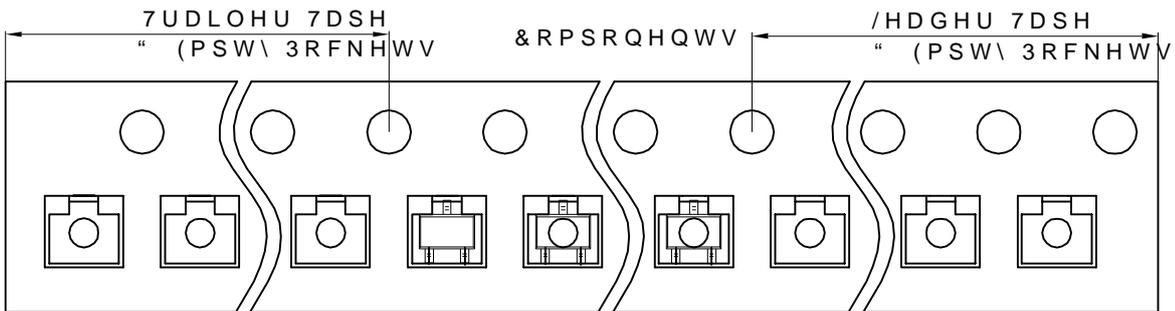
627   5HHO
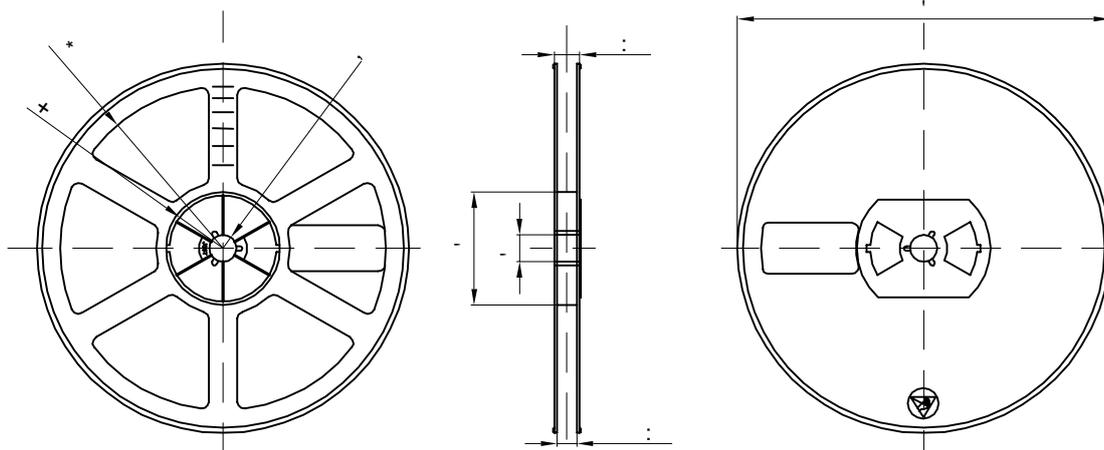
'LPHQVLRQV DUH LQ PLOOLPHWHU							
5HHO 2SWLRQ	'	'	*	+	,	:	:
'LD	'		5	5	5		

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