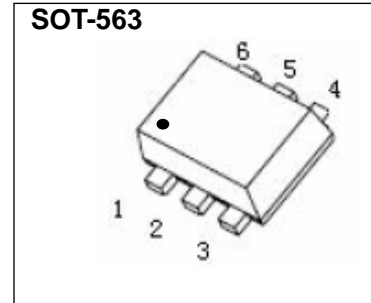


## SOT-563 Plastic-Encapsulate MOSFETS

### CJX3134K Dual N-Channel MOSFET

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



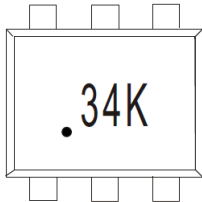
#### FEATURE

- Surface Mount Package
- N-Channel Switch with Low  $R_{DS(on)}$
- Operated at Low Logic Level Gate Drive
- Equivalent to Two CJ3134K.

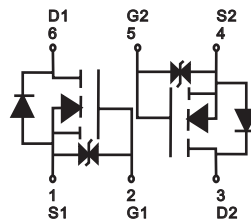
#### APPLICATION

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

#### MARKING



#### Equivalent Circuit



#### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}C$ 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 ( $t \leq 10s$ )	$I_D$	0.75	A
Power dissipation(note1)	$P_D$	0.15	W
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction temperature	$T_J$	150	$^{\circ}C$
Storage temperature	$T_{stg}$	-55~ +150	$^{\circ}C$

## MOSFET ELECTRICAL CHARACTERISTICS

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

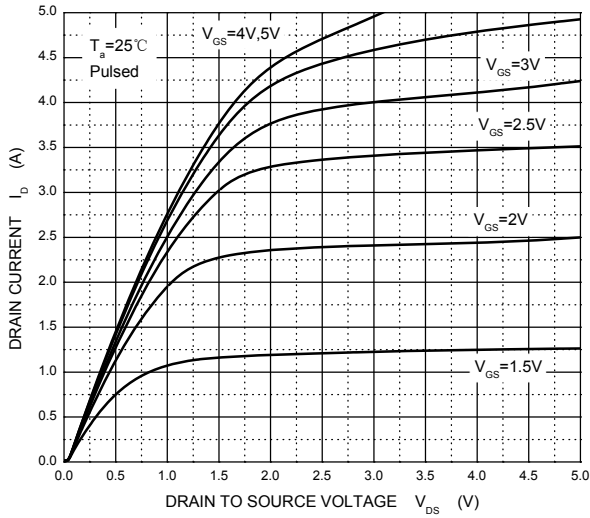
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 20V, V_{GS} = 0V$			1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 10V, V_{DS} = 0V$			$\pm 20$	$\mu A$
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 $\Omega$
		$V_{GS} = 2.5V, I_D = 0.55A$		320	450	m $\Omega$
		$V_{GS} = 1.8V, I_D = 0.45A$		390	800	m $\Omega$
Forward tranconductance (note 2)	$g_{FS}$	$V_{DS} = 10V, I_D = 0.8A$		1.6		S
Diode forward voltage(note 2)	$V_{SD}$	$I_S = 0.15A, V_{GS} = 0V$			1.2	V
<b>DYNAMIC PARAMETERS (note 3)</b>						
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
<b>SWITCHING PARAMETERS (note 3)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V, I_D = 0.5A, R_{GEN} = 10\Omega$		6.7		ns
Turn-on rise time	$t_r$			4.8		ns
Turn-off delay time	$t_{d(off)}$			17.3		ns
Turn-off fall time	$t_f$			7.4		ns
Total Gate Charge	$Q_g$	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 7A$		20		nC
Gate-Source Charge	$Q_{gs}$			1		nC
Gate-Drain Charge	$Q_{gd}$			4		nC

**Notes :**

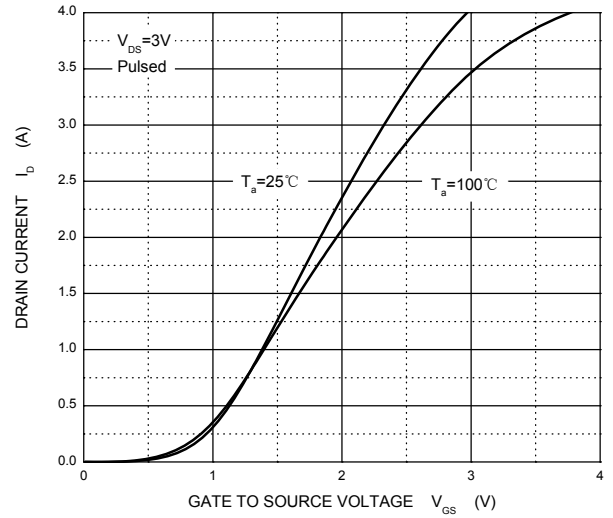
1. Repetitive rating : Pulse width limited by junction temperature.
2. Pulse Test : Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 0.5\%$ .
3. Guaranteed by design, not subject to production testing.

# Typical Characteristics

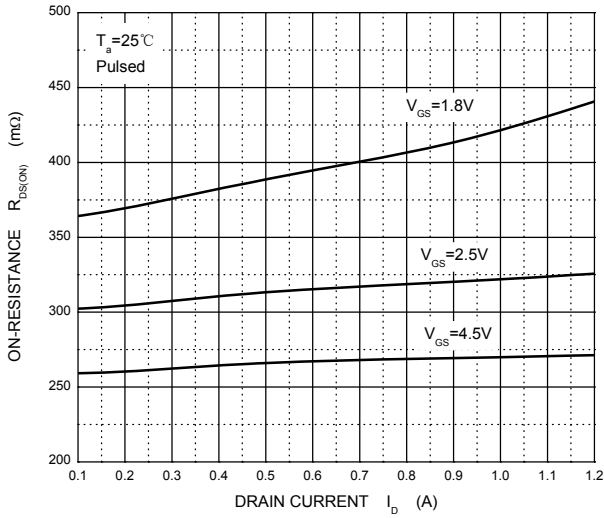
Output Characteristics



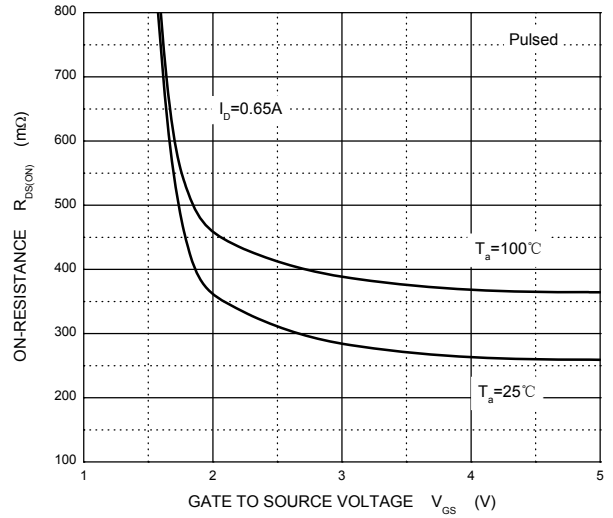
Transfer Characteristics



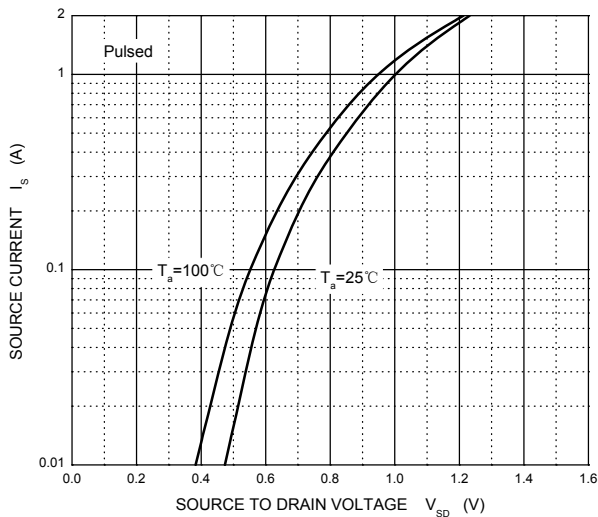
$R_{DS(ON)}$  —  $I_D$



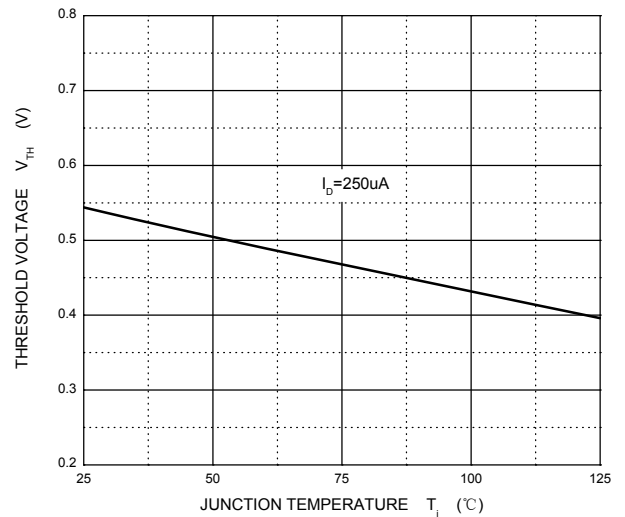
$R_{DS(ON)}$  —  $V_{GS}$



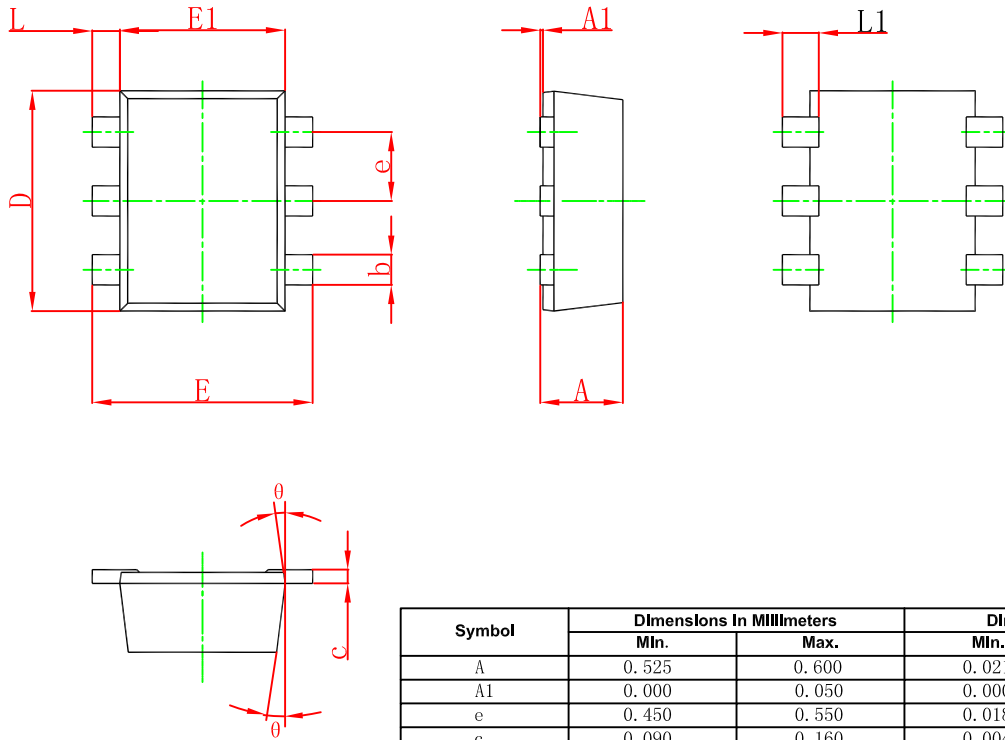
$I_S$  —  $V_{SD}$



Threshold Voltage

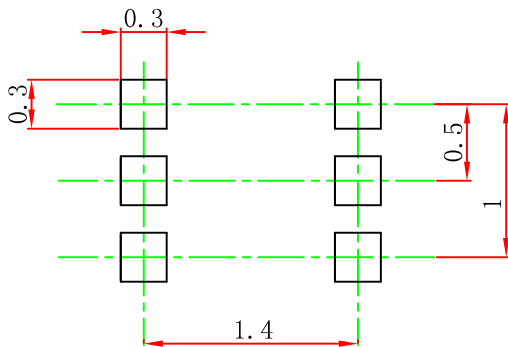


## SOT-563 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
$\theta$	7 <sup>0</sup> REF.		7 <sup>0</sup> REF.	

## SOT-563 Suggested Pad Layout



Note:

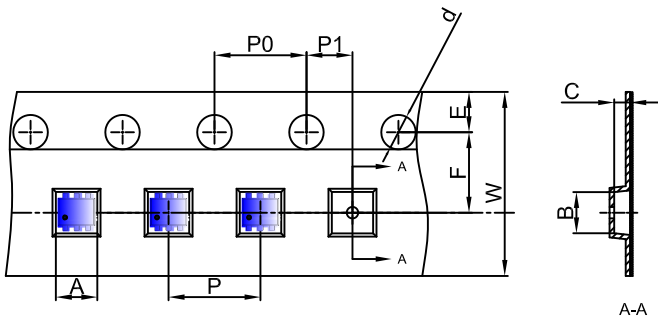
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### 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-563 Tape and Reel

## SOT-563 Embossed Carrier Tape

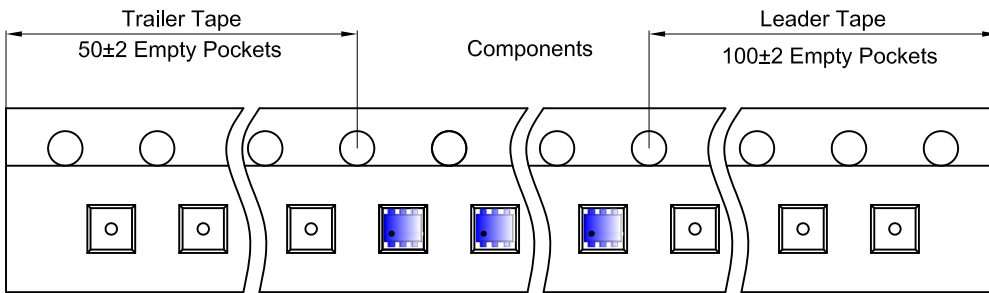


### Packaging Description:

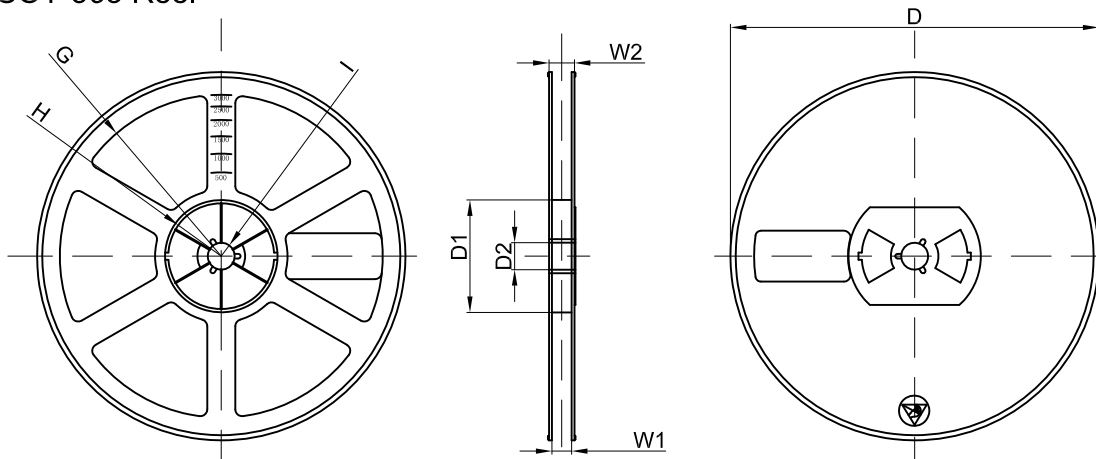
SOT-563 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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-563	1.78	1.78	0.69	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

## SOT-563 Tape Leader and Trailer



## SOT-563 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	