

Description

This Dual P-Channel MOSFET has been designed using advanced Power Trench process to optimize the RDS(ON). Including two P-ch CJX3439K MOSFET (independently) in a package.

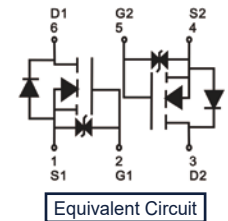
General Features

- Surface Mount Package
- Low RDS(on)
- Operated at Low Logic Level Gate Drive
- ESD Protected Gate
- Including a N-ch CJ3134K and a P-ch CJ3139K (independently) In a Package



Applications

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



Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
CJX3439K	SOT-563	CJX3439K 产品名称 product name	49K	3000

ABSOLUTE MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Rating	Units
N-MOSFET			
V _{DSS}	Drain-Source Voltage	20	V
V _{GS}	Typical Gate-Source Voltage	± 12	V
I _D	Continuous Drain Current (note 1)	0.75	A
I _{DM}	Pulsed Drain Current (tp=10us)	1.8	A
P-MOSFET			
V _{DSS}	Drain-Source Voltage	-20	V
V _{GS}	Typical Gate-Source Voltage	± 12	V
I _D	Continuous Drain Current (note 1)	-0.66	A
I _{DM}	Pulsed Drain Current (tp=10us)	-1.2	A
Absolute Maximum Ratings			
P _D	Power Dissipation (note 1)	150	mW
R _{θJA}	Thermal Resistance from Junction to Ambient (note 1)	833	°C/W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55~+150	°C
T _L	Lead Temperature for Soldering Purposes	260	°C

N-ch MOSFET Electrical Characteristics (TA=25℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250μA	20	---	---	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =20V,V _{GS} =0V	---	---	1	μA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±10V , V _{DS} =0V	---	---	±20	μA
V _{GS(th)}	Gate Threshold Voltage (note 2)	V _{GS} =V _{DS} , I _D =250μA	0.35	---	1.1	V
R _{DS(ON)}	Drain-source on-resistance(note 2)	V _{GS} =4.5V, I _D =0.65A	---	---	260	mΩ
		V _{GS} =2.5V,I _D =0.55A	---	---	430	
		V _{GS} =1.8V , I _D =0.45A	---	---	800	
g _{fs}	Forward Transconductance(note 2)	V _{DS} =10V , I _D =0.8A	---	1.6	---	S
V _{SD}	Diode Forward Voltage	I _S =0.15A,V _{GS} =0V	---	---	1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
C _{iss}	Input Capacitance	V _{DS} =16V , V _{GS} =0V , f=1MHz	---	79	120	pF
C _{oss}	Output Capacitance		---	13	20	
C _{rss}	Reverse Transfer Capacitance		---	9	15	
SWITCHING CHARACTERISTICS (note 3,4)						
T _{d(on)}	Turn-On Delay Time	V _{GS} =4.5V,V _{DS} =10V, I _D =500mA,R _{GEN} =10Ω	---	6.7	---	ns
T _r	Rise Time		---	4.8	---	
T _{d(off)}	Turn-Off Delay Time		---	17.3	---	
T _f	Fall Time		---	7.4	---	

P-ch MOSFET Electrical Characteristics (TA=25℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =-250μA	20	---	---	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-20V,V _{GS} =0V	---	---	-1	μA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±10V , V _{DS} =0V	---	---	±20	μA
V _{GS(th)}	Gate Threshold Voltage (note 2)	V _{GS} =V _{DS} , I _D =-250μA	-0.35	---	-1.1	V
R _{DS(ON)}	Drain-source on-resistance(note 2)	V _{GS} =-4.5V, I _D =-1A	---	260	430	mΩ
		V _{GS} =-2.5V,I _D =-0.8A	---	320	700	
		V _{GS} =-1.8V , I _D =-0.5A	---	950	---	
g _{fs}	Forward Transconductance(note 2)	V _{DS} =-10V , I _D =-0.54A	---	1.2	---	S
V _{SD}	Diode Forward Voltage	I _S =-0.5A,V _{GS} =0V	---	---	-1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
C _{iss}	Input Capacitance	V _{DS} =-16V , V _{GS} =0V , f=1MHz	---	113	170	pF
C _{oss}	Output Capacitance		---	15	25	
C _{rss}	Reverse Transfer Capacitance		---	9	15	
SWITCHING CHARACTERISTICS (note 3,4)						
T _{d(on)}	Turn-On Delay Time	V _{GS} =-4.5V,V _{DS} =-10V, I _D =-200mA,R _{GEN} =-10Ω	---	9	---	ns
T _r	Rise Time		---	5.8	---	
T _{d(off)}	Turn-Off Delay Time		---	32.7	---	
T _f	Fall Time		---	20.3	---	

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 temperature.
- 4.Garanted by design , not subject to producing.



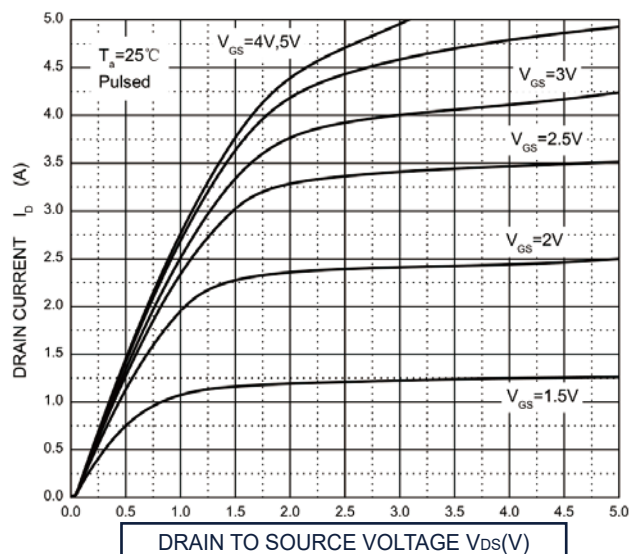
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TL-CJX3439K

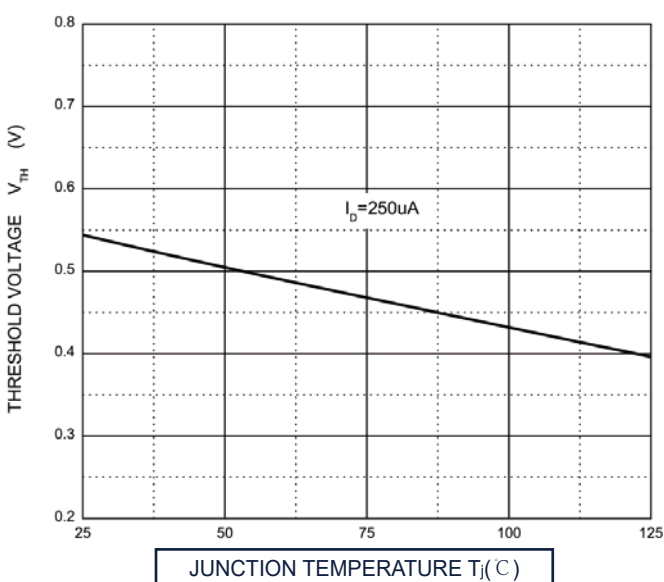
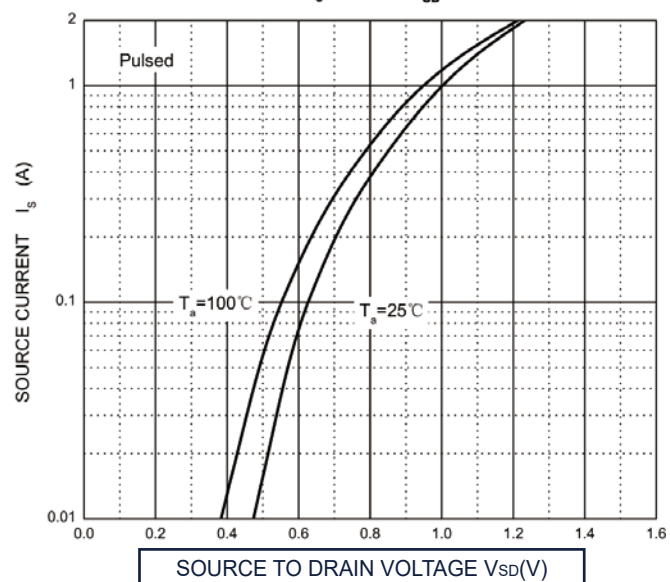
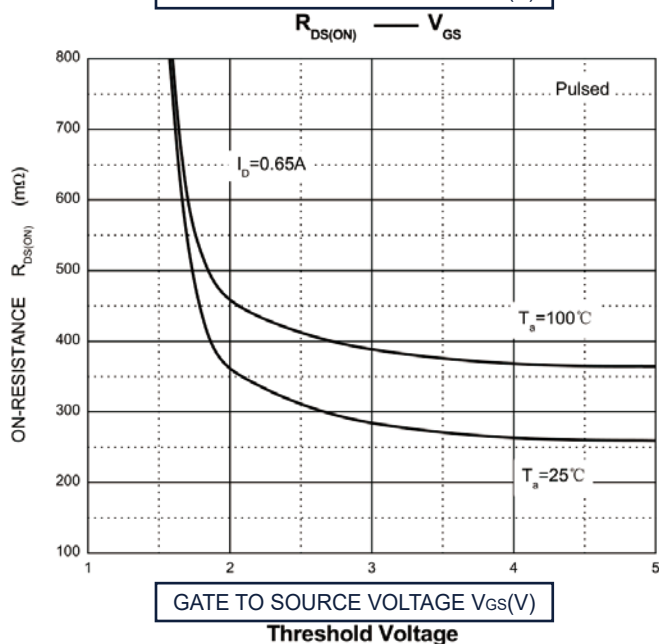
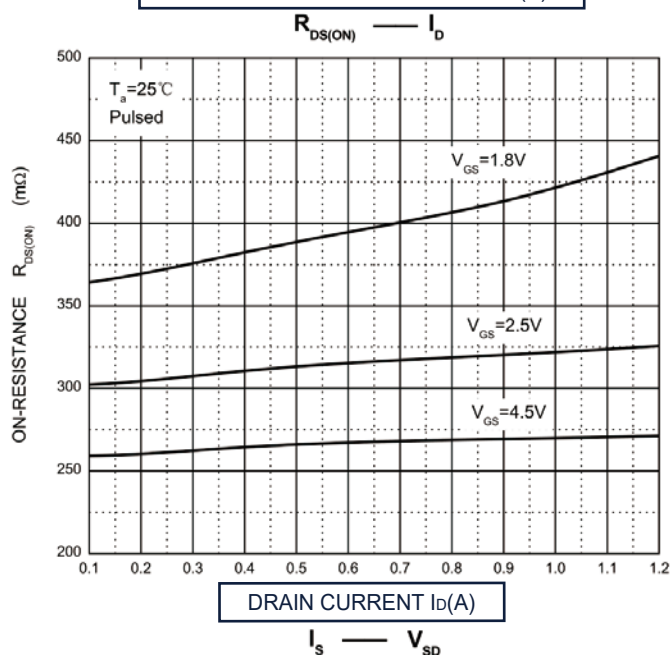
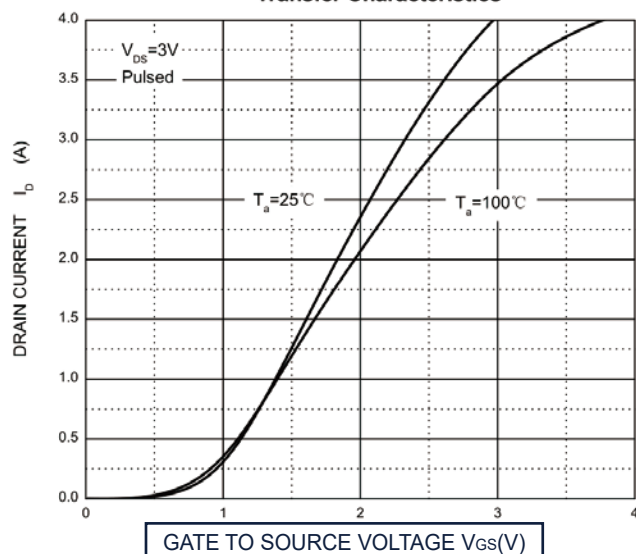
SOT-563 $\pm 20\text{V}$ N Channel +P Channel MOSFET

Typical Characteristics (N-Channel MOS)

Output Characteristics



Transfer Characteristics





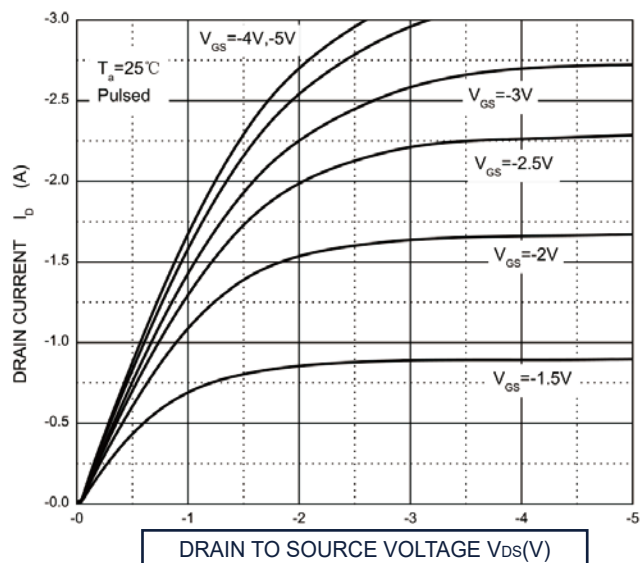
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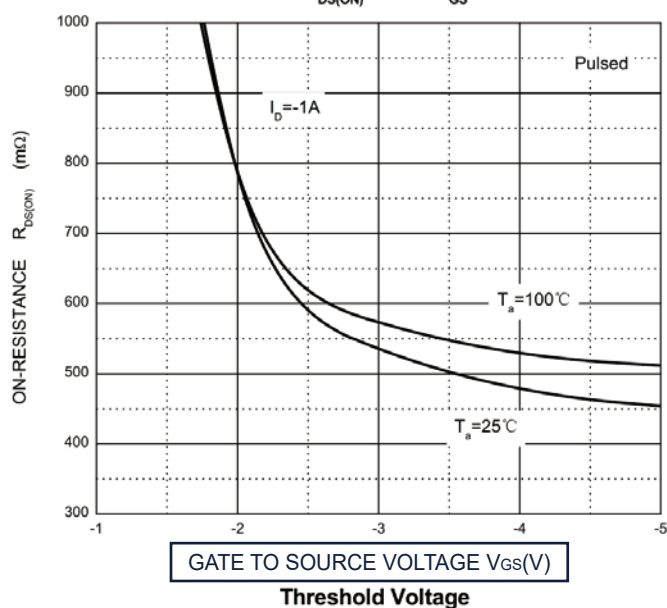
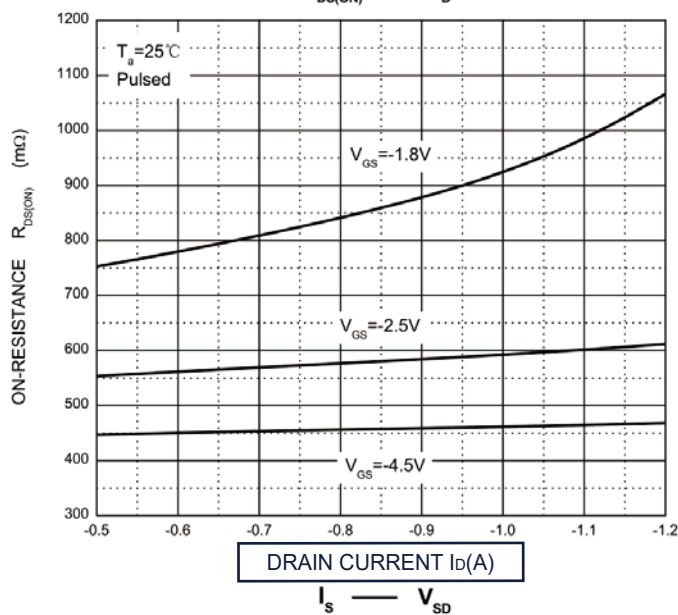
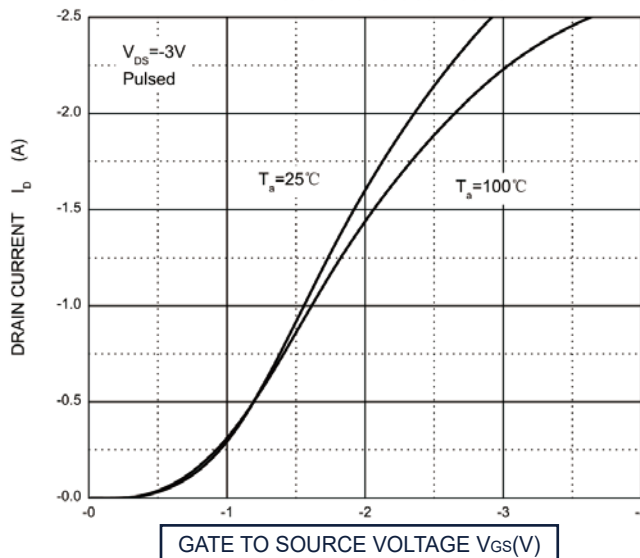
SOT-563 $\pm 20V$ N Channel +P Channel MOSFET

Typical Characteristics (P-Channel MOS)

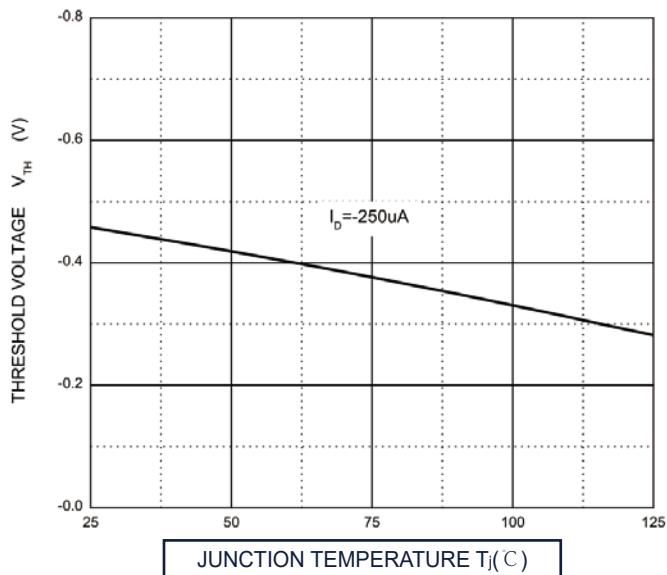
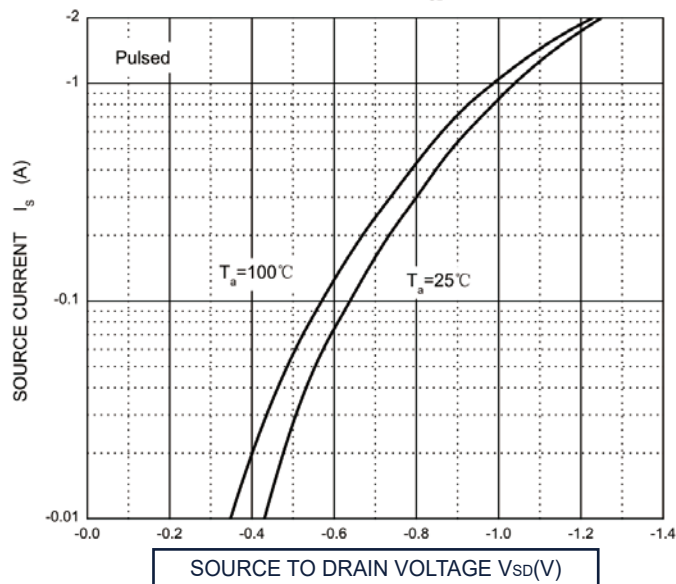
Output Characteristics



Transfer Characteristics

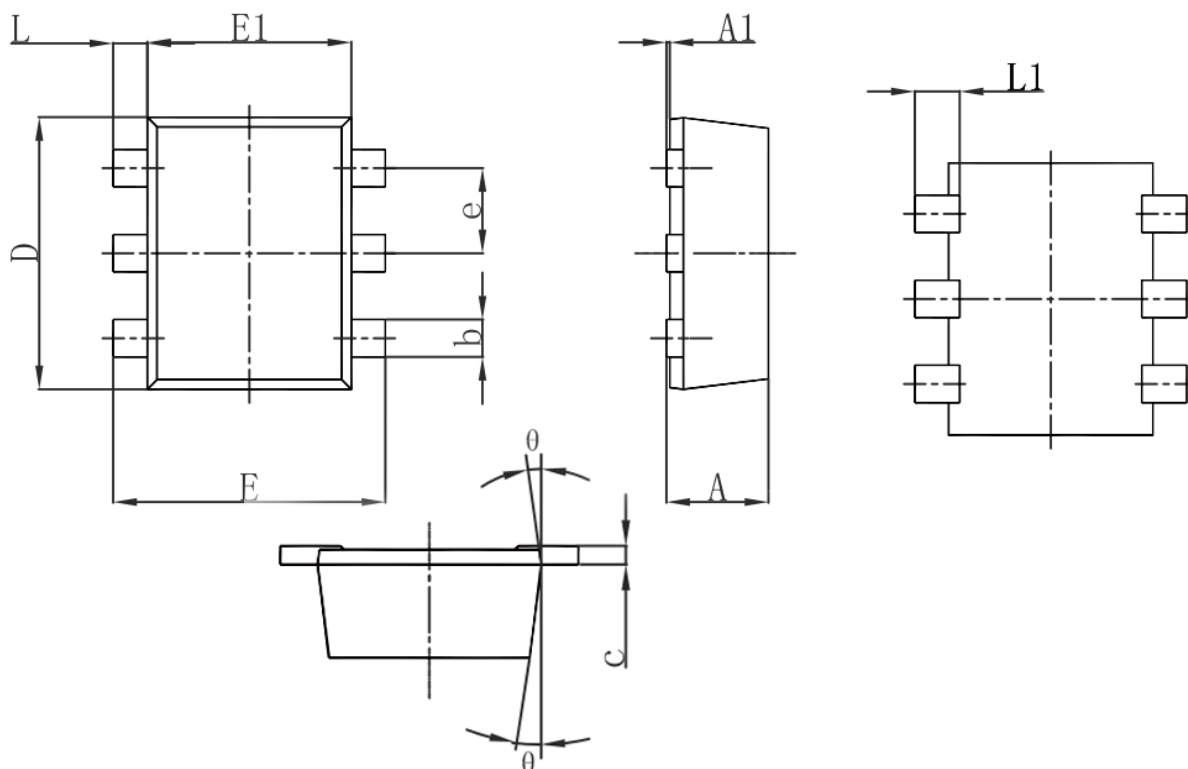


Threshold Voltage





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	0.06
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
θ	10° REF.		10° REF.	