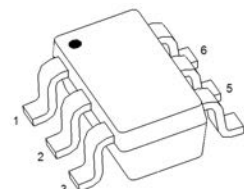


**SOT-23-6L Plastic-Encapsulate MOSFETS****CJL02N10** N-Channel 100V(D-S) MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
100V	100mΩ@10V	2A

General Description

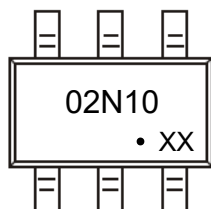
The CJL02N10 uses advanced trench technology to provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use as a load switch or in PWM applications.

SOT-23-6L**FEATURE**

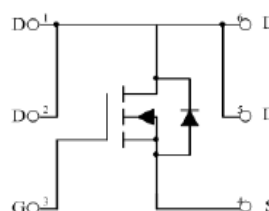
- Excellent package for good heat dissipation
- Ultra low gate charge
- Low reverse transfer capacitance
- Fast switching capability
- Avalanche energy specified

APPLICATION

- Power switching application

MARKING

02N10=Device code
Solid point=Pin1 positioning point
XX=Date Code

Equivalent Circuit**Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	2	A
Pulsed Drain Current	I_{DM}	10	
Maximum Power Dissipation	P_D	0.8	W
Thermal Resistance from Junction to Ambient($t \leq 5s$)	$R_{\theta JA}$	156	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

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

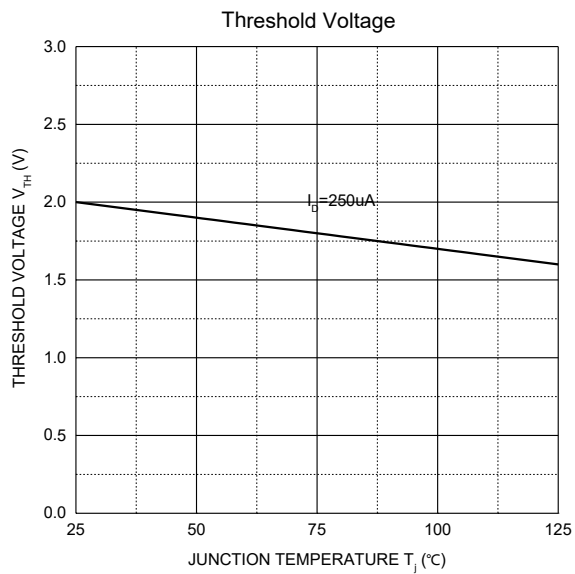
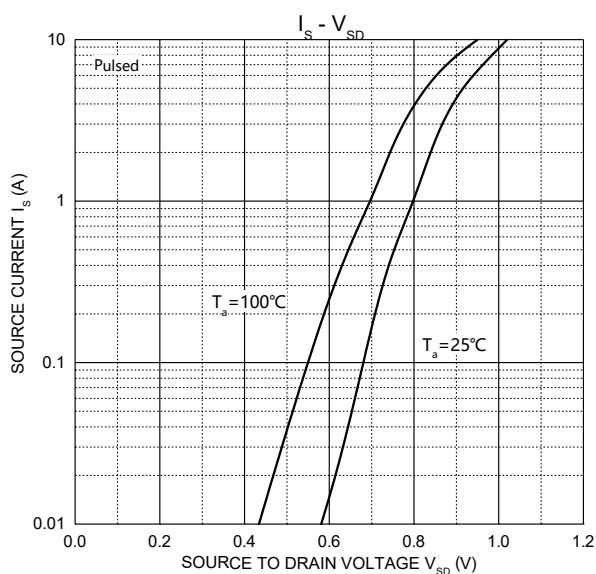
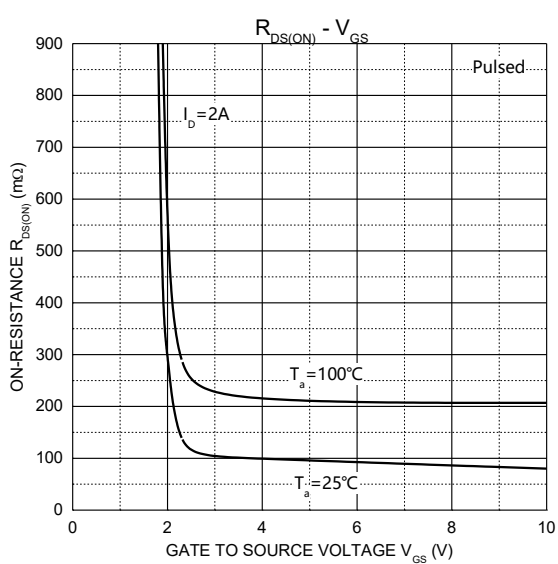
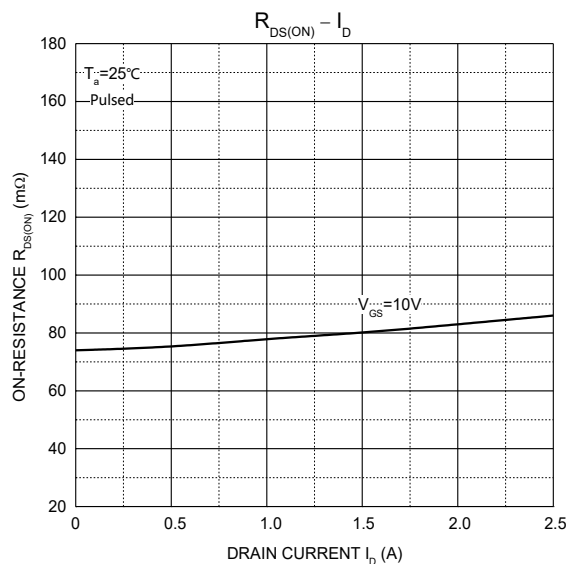
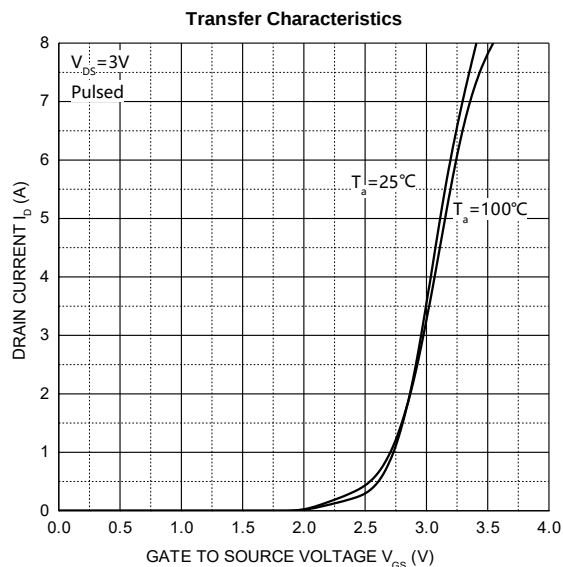
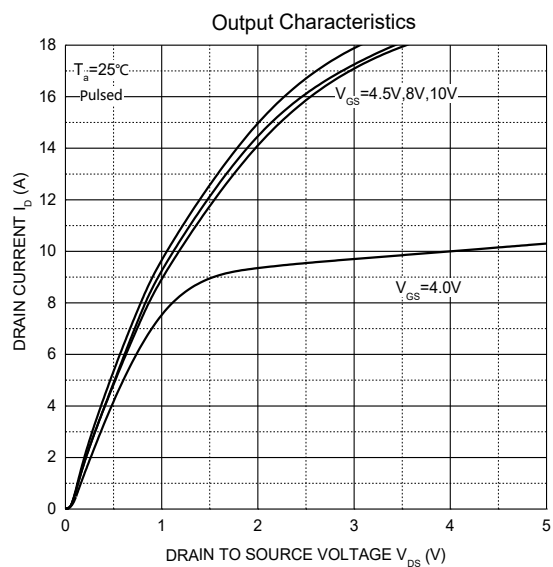
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	100			V
Gate-source threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1.0		3.0	
Gate-source leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} =80V, V _{GS} =0V			1	μA
Drain-source on-state resistance ^a	R _{DS(on)}	V _{GS} =10V, I _D =2.0A		80	100	mΩ
Dynamic ^b						
Input capacitance	C _{iss}	V _{DS} =25V,V _{GS} =0V,f =1MHz		890		pF
Output capacitance	C _{oss}			60		
Reverse transfer capacitance	C _{rss}			25		
Total gate charge	Q _g	V _{DS} =80V,V _{GS} =10V,I _D =2A		24		nC
Gate-source charge	Q _{gs}			5		
Gate-drain charge	Q _{gd}			8		
Turn-on delay time	t _{d(on)}	V _{DD} =25V , V _{GS} =10V , R _G =1Ω, R _L =5Ω		14.2		ns
Rise time	t _r			33.7		
Turn-off delay time	t _{d(off)}			40.2		
Fall time	t _f			6		
Drain-source body diode characteristics						
Body diode voltage	V _{SD}	V _{GS} =0V , I _S =2A ,		0.8	1.2	V

Notes :

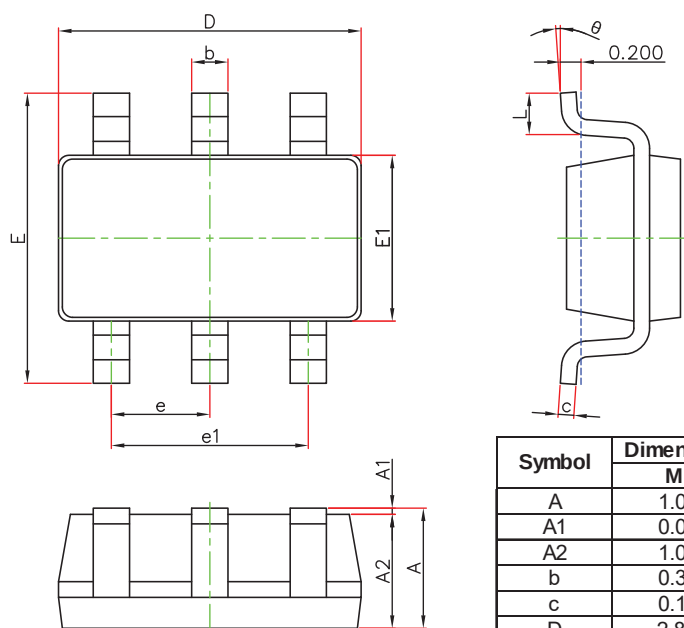
a. Pulse Test : Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.

b. Guaranteed by design, not subject to production testing.

Typical Characteristics

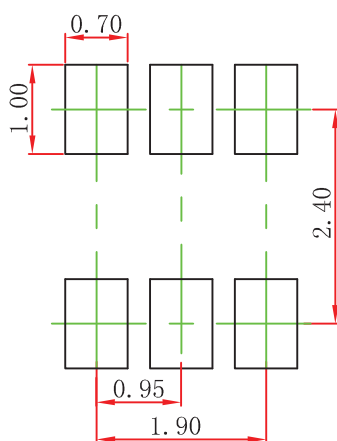


SOT-23-6L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
K	0°	8°	0°	8°

SOT-23-6L Suggested Pad Layout



Note:

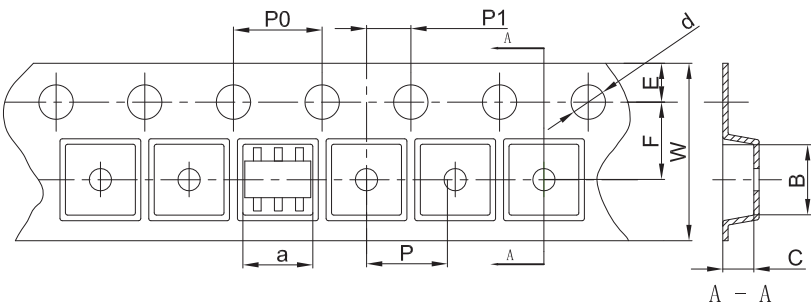
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

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-23-6L Tape and Reel

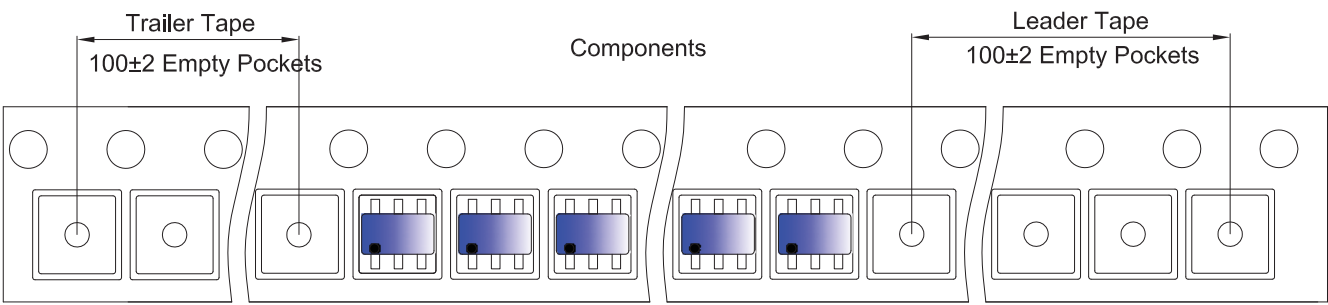
SOT-23-6L Embossed Carrier Tape



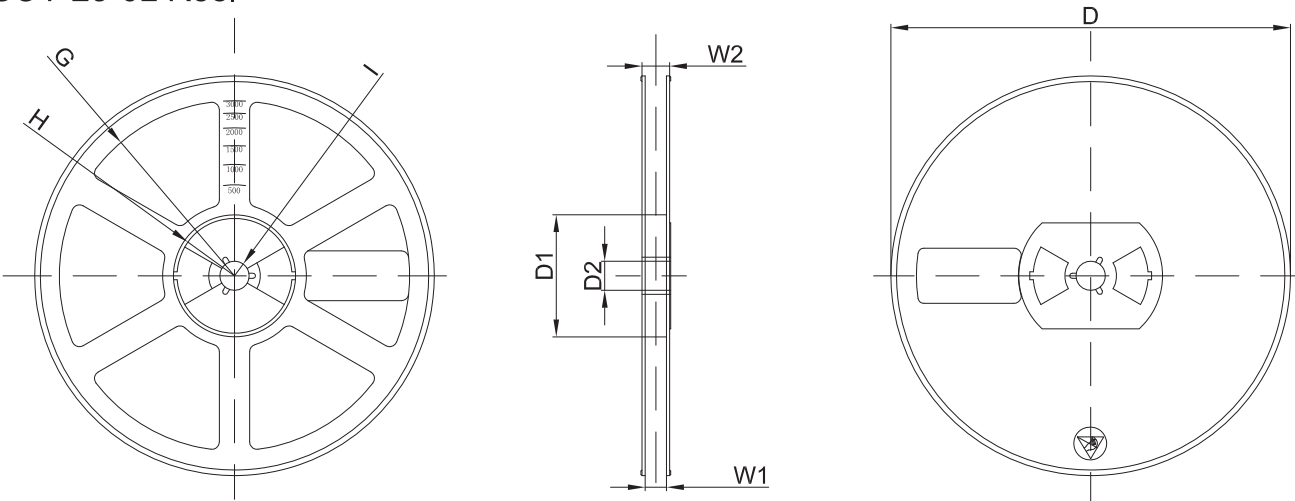
Packaging Description:
SOT-23-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm 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-23-6L	3.17	3.23	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23-6L Tape Leader and Trailer



SOT-23-6L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	