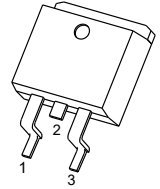


**TO-263-2L Plastic-Encapsulate MOSFETS****CJB110SN10 N-Channel Power MOSFET**

$V_{(BR)DSS}$	$R_{DS(on)}$ TYP	I_D
100V	8.5m Ω @10V	110A
	9.5m Ω @4.5V	

TO-263-2L

1. GATE
2. DRAIN
3. SOURCE

DESCRIPTION

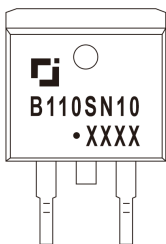
The CJB110SN10 uses shielded gate trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge. It can be used in a wide variety of applications

FEATURES

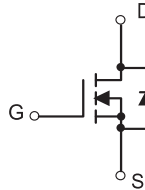
- Low $R_{DS(on)}$
- Low Gate Charge

APPLICATIONS

- High efficiency power supply
- Secondary synchronus rectifier

MARKING

B110SN10= Device code
Solid dot = Green molding compound device,
if none, the normal device
XXXX=Code

EQUIVALENT CIRCUIT**ABSOLUTE 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	110	A
Pulsed Drain Current ⁽¹⁾	I_{DM}	330	
Maximum Power Dissipation ⁽⁴⁾	P_D	192	W
Avalanche energy*	E_{AS}	80	mJ
Thermal Resistance from Junction to Case	$R_{\theta JC}$	0.65	$^\circ\text{C/W}$
Thermal Resistance from Junction to Ambient ⁽³⁾	$R_{\theta JA}$	62	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	

* EAS test condition $V_{DD}=50\text{V}$, $R_G=25\ \Omega$, $L=0.5\ \text{mH}$, starting $T_J=25\ ^\circ\text{C}$.

MOSFET ELECTRICAL CHARACTERISTICS

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

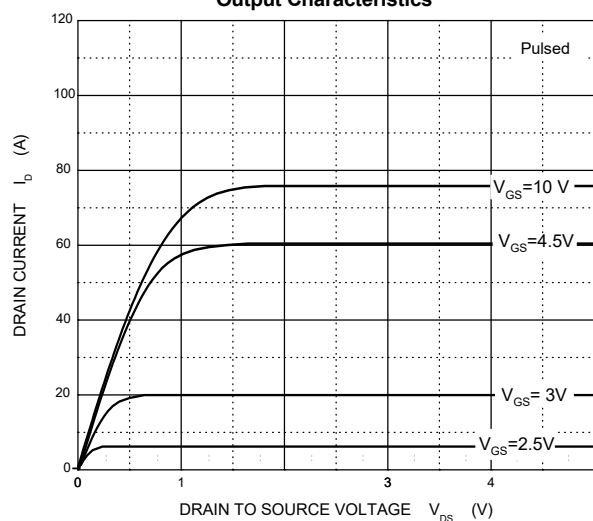
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 100V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage ⁽¹⁾	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	1.8	2.5	V
Drain-source on-resistance ⁽¹⁾	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 10A$		8.5	10	m Ω
		$V_{GS} = 4.5V, I_D = 10A$		9.5	14	
Forward tranconductance ⁽¹⁾	g_{FS}	$V_{DS} = 5.0V, I_D = 20A$		51		S
Dynamic characteristics ⁽²⁾						
Total gate charge	Q_g	$V_{DS} = 50V, V_{GS} = 10V, I_D = 25A$		46.5		nC
Gate-source charge	Q_{gs}			5.7		
Gate-drain charge	Q_{gd}			10.9		
Input Capacitance	C_{iss}	$V_{DS} = 50V, V_{GS} = 0V, f = 100kHz$		3050		pF
Output Capacitance	C_{oss}			323		
Reverse Transfer Capacitance	C_{rss}			10.2		
SWITCHING PARAMETERS ⁽²⁾						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10V, V_{DS} = 50V,$ $R_G = 2.2\Omega, I_D = 25A$		18.5		ns
Turn-on rise time	t_r			4.7		
Turn-off delay time	$t_{d(off)}$			50.3		
Turn-off fall time	t_f			8.8		
Source-Drain Diode characteristics ⁽¹⁾						
Body diode voltage	V_{SD}	$I_S = 20A, V_{GS} = 0V$			1.3	V

Notes:

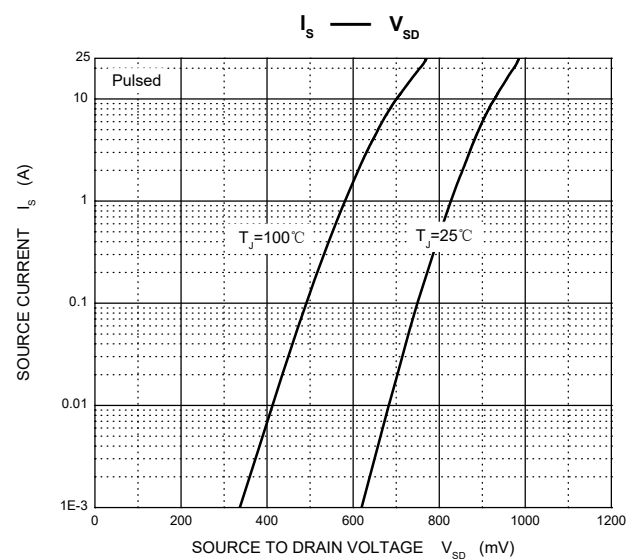
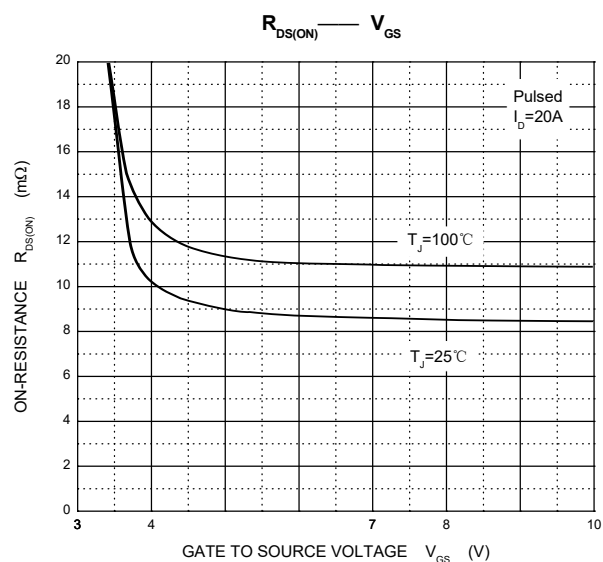
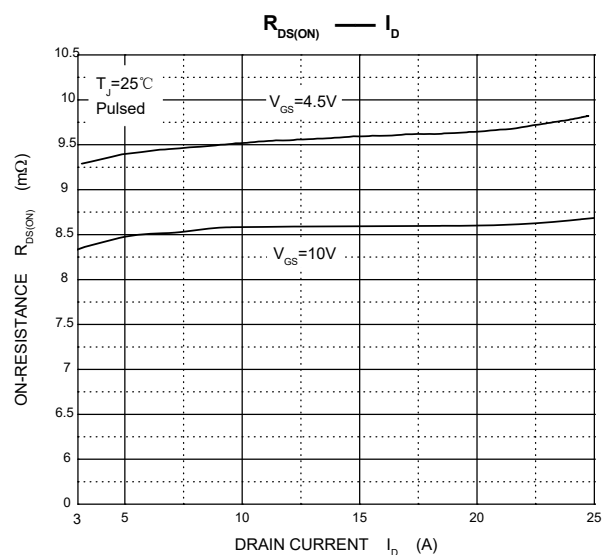
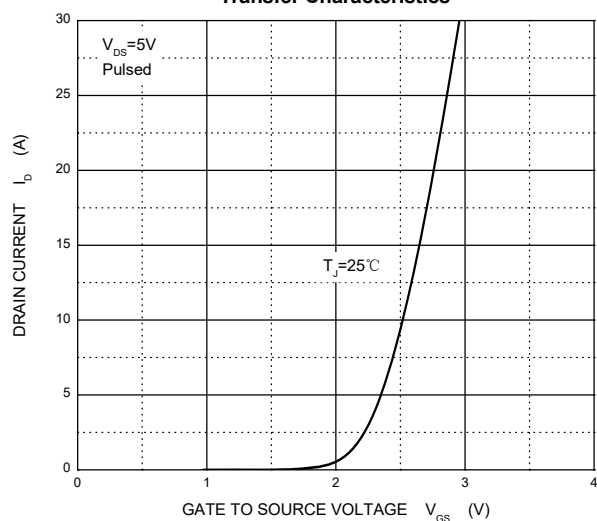
1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.
3. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a = 25\text{ }^{\circ}\text{C}$.

Typical Characteristics

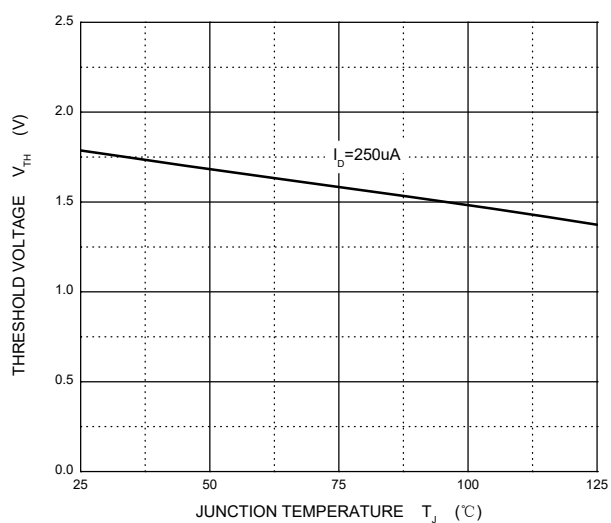
Output Characteristics



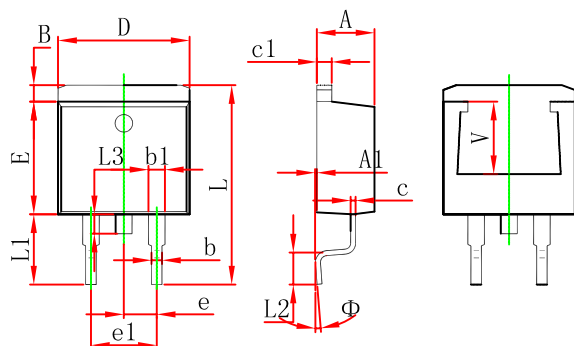
Transfer Characteristics



Threshold Voltage

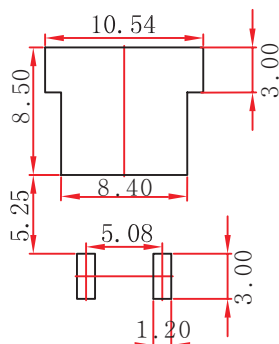


TO-263-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.120	1.420	0.044	0.056
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	14.940	15.500	0.588	0.610
L1	4.950	5.450	0.195	0.215
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
Φ	0°	8°	0°	8°
V	5.600 REF.		0.220 REF.	

TO-263-2L 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

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.