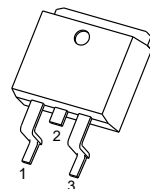


**TO-263-2L Plastic-Encapsulate MOSFETS****CJB110SN10 N-Channel Power MOSFET**

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

TO-263-2L

1. GATE
2. DRAIN
3. SOURCE

DESCRIPTION

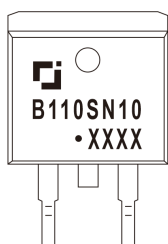
The CJB110SN10 uses shielded gate trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge. It can be used in a wide variety of applications

FEATURES

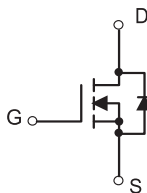
- Low $R_{DS(on)}$
- Low Gate Charge

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

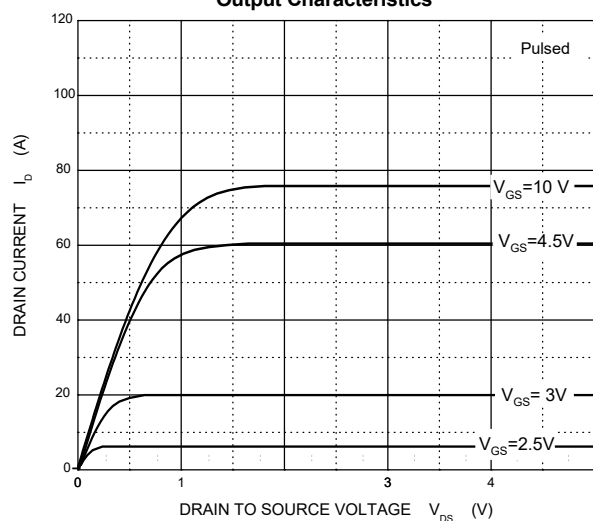
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 100V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 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:

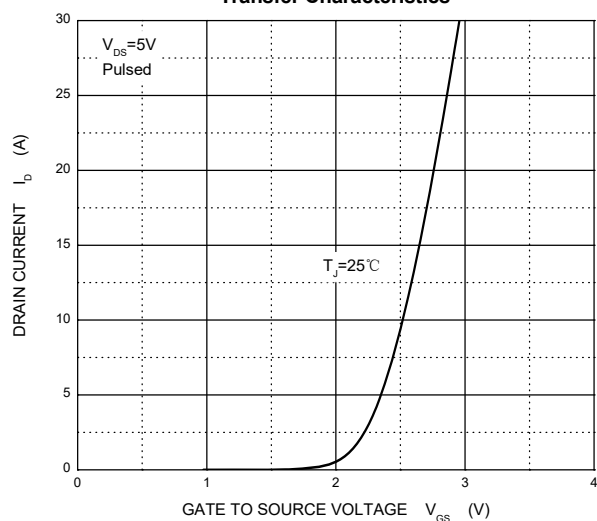
1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.
3. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a = 25\text{ }^{\circ}\text{C}$.

Typical Characteristics

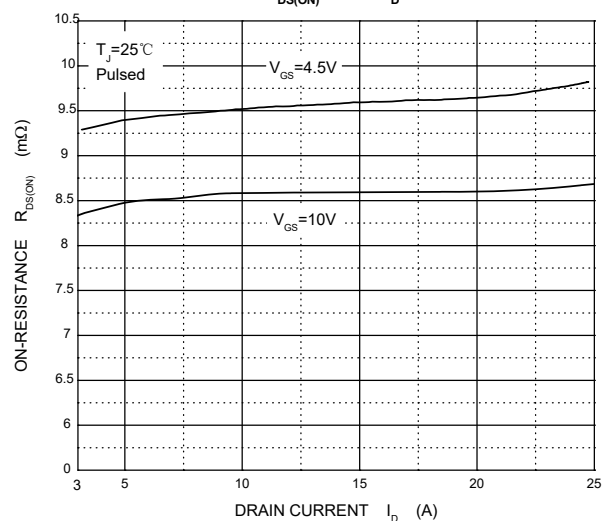
Output Characteristics



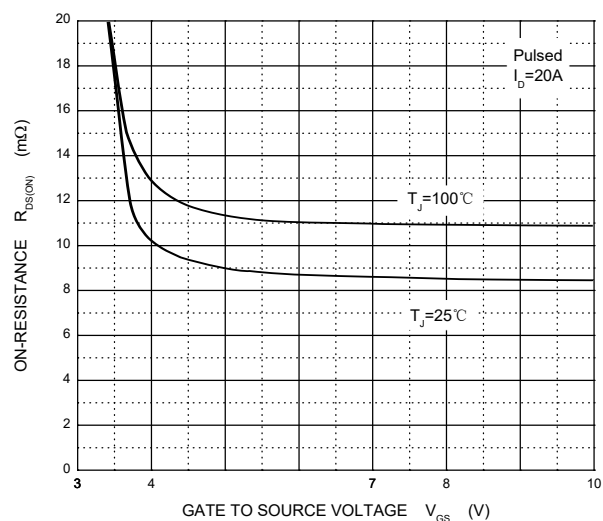
Transfer Characteristics



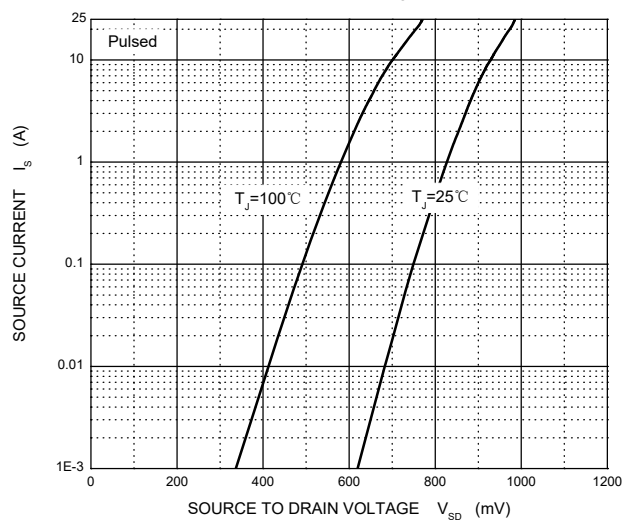
$R_{DS(ON)}$ — I_D



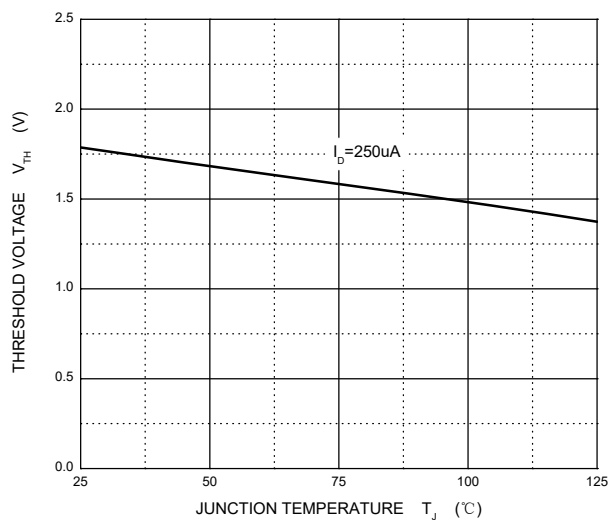
$R_{DS(ON)}$ — V_{GS}



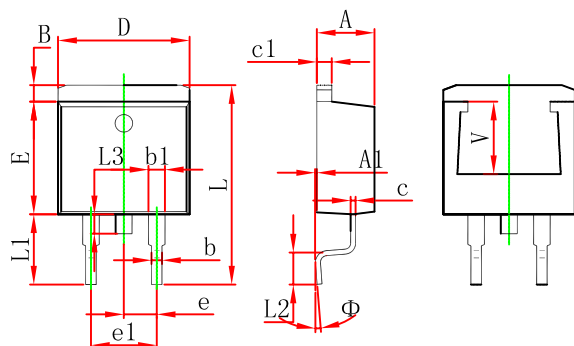
I_S — V_{SD}



Threshold Voltage

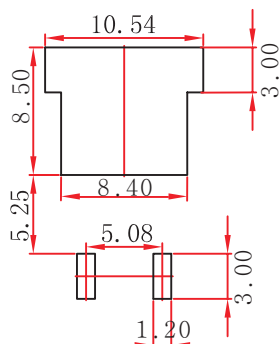


TO-263-2L Package Outline Dimensions



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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