BD907/909/911 BD908/910/912

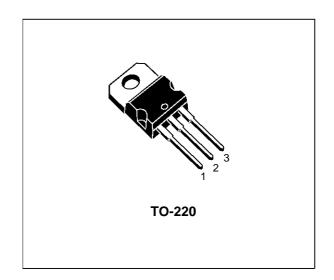
COMPLEMENTARY SILICON POWER TRANSISTORS

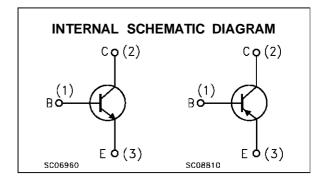
■ BD908, BD909, BD910, BD911 AND BD912 SGS-THOMSON PREFERRED SALESTYPES

DESCRIPTION

The BD707, BD709, and BD711 are silicon epitaxial-base NPN power transistors in Jedec TO-220 plastic package, intented for use in power linear and switching applications.

The complementary PNP types are BD908, BD910, and BD912 respectively.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value			
		NPN	BD907	BD909	BD911	1
		PNP	BD908	BD910	BD912	1
V _{CBO}	Collector-Base Voltage (I _E = 0)		60	80	100	V
V_{CEO}	Collector-Emitter Voltage (I _B = 0)		60	80	100	V
V _E BO	Emitter-Base Voltage (Ic = 0)			5		V
I_{E},I_{C}	Collector Current			15		Α
Ι _Β	Base Current			Α		
P_{tot}	Total Dissipation at T _c ≤ 25 °C			90		W
T _{stg}	Storage Temperature			-65 to 150		°C
Tj	Max. Operating Junction Temperature			150		°C

For PNP types voltage and current values are negative.

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BD907/BD908/BD909/BD910/BD911/BD912

THERMAL DATA

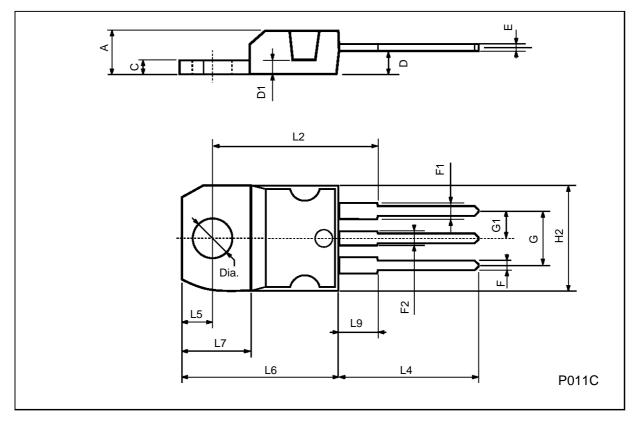
ELECTRICAL CHARACTERISTICS ($T_{case} = 25$ °C unless otherwise specified)

Symbol	Parameter	Test C	Min.	Тур.	Max.	Unit	
I _{CBO}	Collector Cut-off Current (I _E = 0)	for BD907/908 for BD909/910 for BD911/912 T _{case} = 150 °C for BD907/908 for BD909/910 for BD911/912	V _{CB} = 60 V V _{CB} = 80 V V _{CB} = 100 V V _{CB} = 60 V V _{CB} = 80 V V _{CB} = 100 V			500 500 500 500	μΑ μΑ μΑ mA mA
I _{CEO}	Collector Cut-off Current (I _B = 0)	for BD907/908 for BD909/910 for BD911/912	V _{CB} = 30 V V _{CB} = 40 V V _{CB} = 50 V			1 1 1	mA mA mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V				1	mΑ
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 100 mA	for BD907/908 for BD909/910 for BD911/912	60 80 100			V V V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 5 A I _C = 10 A	I _B = 0.5 A I _B = 2.5 A			1 3	V V
$V_{BE(sat)^*}$	Base-Emitter Saturation Voltage	I _C = 10 A	I _B = 2.5 A			2.5	V
V _{BE} *	Base-Emitter Voltage	I _C = 5 A	V _{CE} = 4 V			1.5	V
h _{FE} *	DC Current Gain	I _C = 0.5 A I _C = 5 A I _C = 10 A	V _{CE} = 4 V V _{CE} = 4 V V _{CE} = 4 V	40 15 5		250 150	
f _T	Transition frequency	I _C = 0.5 A	V _{CE} = 4 V	3			MHz

* Pulsed: Pulse duration = $300 \,\mu s$, duty cycle 1.5 % ** Value for which I_C = $3.3 \,A$ at V_{CE} = 2V. For PNP types voltage and current values are negative.

TO-220 MECHANICAL DATA

DIM.	mm			inch			
DINI.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
А	4.40		4.60	0.173		0.181	
С	1.23		1.32	0.048		0.051	
D	2.40		2.72	0.094		0.107	
D1		1.27			0.050		
E	0.49		0.70	0.019		0.027	
F	0.61		0.88	0.024		0.034	
F1	1.14		1.70	0.044		0.067	
F2	1.14		1.70	0.044		0.067	
G	4.95		5.15	0.194		0.203	
G1	2.4		2.7	0.094		0.106	
H2	10.0		10.40	0.393		0.409	
L2		16.4			0.645		
L4	13.0		14.0	0.511		0.551	
L5	2.65		2.95	0.104		0.116	
L6	15.25		15.75	0.600		0.620	
L7	6.2		6.6	0.244		0.260	
L9	3.5		3.93	0.137		0.154	
DIA.	3.75		3.85	0.147		0.151	



BD907/BD908/BD909/BD910/BD911/BD912

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