

Boca Semiconductor Corp.

BSC

Switching And Linear Application DC to VHF Amplifier Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N2906A, 07A	UNIT
Collector -Emitter Voltage	V _{CEO}	60	V
Collector -Base Voltage	V _{CBO}	60	V
Emitter -Base Voltage	V _{EBO}	5.0	V
Collector Current Continuous	I _C	600	mA
Power Dissipation @ Ta=25 degC	PD	400	mW
Derate Above 25deg C		2.28	mW/deg C
@ Tc=25 degC	PD	1.8	W
Derate Above 25deg C		10.3	mW/deg C
Operating And Storage Junction Temperature Range	T _j , T _{stg}		deg C

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

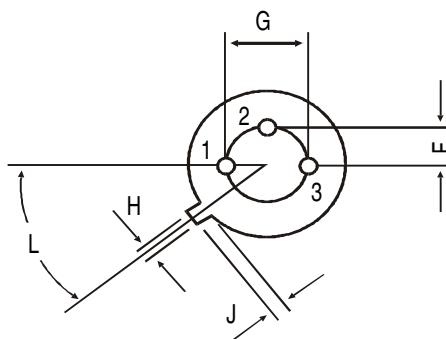
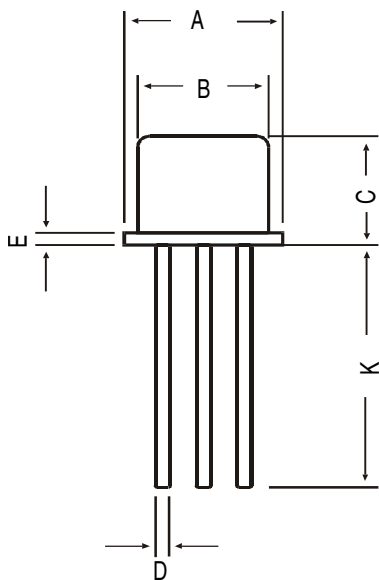
DESCRIPTION	SYMBOL	TEST CONDITION	VALUE		UNIT
			MIN	MAX	
Collector -Emitter Voltage	V _{CEO} *	I _C =10mA, I _B =0	60	-	V
Collector -Base Voltage	V _{CBO}	I _C =10uA, I _E =0	60	-	V
Emitter-Base Voltage	V _{EBO}	I _E =10uA, I _C =0	5.0	-	V
Collector-Cut off Current	I _{CBO}	V _{CB} =50V, I _E =0	-	10	nA
		Ta=150 deg C			
		V _{CB} =50V, I _E =0	-	10	uA
	I _C EX	V _{CE} =30V, V _{BE} =0.5V	-	50	nA
Base Current	I _B	V _{CE} =30V, V _{BE} =0.5V	-	50	nA
Collector Emitter Saturation Voltage	V _{CE} (Sat)*	I _C =150mA, I _B =15mA	-	0.4	V
		I _C =500mA, I _B =50mA	-	1.6	V
Base Emitter Saturation Voltage	V _{BE} (Sat) *	I _C =150mA, I _B =15mA	-	1.3	V
		I _C =500mA, I _B =50mA	-	2.6	V
			2N2906A	2N2907A	
DC Current Gain	h _{FE}	I _C =0.1mA, V _{CE} =10V	>40	>75	
		I _C =1mA, V _{CE} =10V	>40	>100	
		I _C =10mA, V _{CE} =10V	>40	>100	
		I _C =150mA, V _{CE} =10V*	40-120	100-300	
		I _C =500mA, V _{CE} =10V*	>40	>50	

Transition Frequency	ft **	IC=50mA, VCE=20V, f=100MHz	200	-	MHz
Out-Put Capacitance	Cob	VCB=10V, IE=0, f=100kHz	-	8.0	pF
Input Capacitance	Cib	VBE=2V, IC=0, f=100kHz	-	30	pF
<u>Switching Time</u>					
Delay time	td	IC=150mA, IB1=15mA	-	10	ns
Rise time	tr	VCC=30V	-	40	ns
Turn-On Time	ton			45	ns
Storage time	ts	IC=150mA, IB1=IB2=15mA	-	80	ns
Fall time	tf	VCC=6V	-	30	ns
Turn-Off Time	toff		-	100	ns

*Pulse Test :-Pulse Width=300us, Duty Cycle=2%

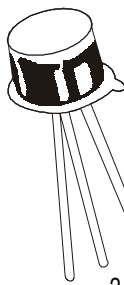
**ft is defined as the frequency at which h_{fe} / extrapolates to unity

TO-18 Metal Can Package



All diminsions in mm.

DIM	MIN	MAX
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	—	1.27
G	—	2.97
H	0.91	1.17
J	0.71	1.21
K	12.70	—
L	45 DEG	



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR