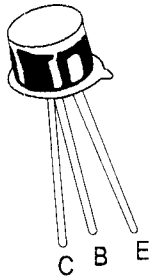
SOLID STATE INC.
46 FARRAND STREET
BLOOMFIELD, NEW JERSEY 07003 www.solidstateinc.com

NPN SILICON PLANAR SWITCHING TRANSISTORS

2N2906, 07



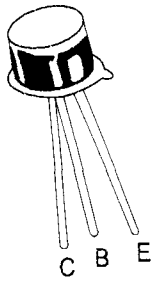
TO-18
Metal Can Package

Switching and Linear Application DC and VHF Amplifier Applications

DESCRIPTION	SYMBOL	2N 2906, 07	UNITS
Collector Emitter Voltage	V_{CEO}	40	V
Collector Base Voltage	V_{CBO}	60	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	600	A
Power Dissipation @ Ta=25°C	P_D	400	W
Derate Above 25°C		2.28	mW/°C
Power Dissipation@ Tc=25°C	P_D	1.8	W
Derate Above 25°C		10.3	mW/°C
Operating And Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS (Ta=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Breakdown Voltage	BV_{CEO}*	I_C=10mA,I_B=0	40		V
Collector Base Breakdown Voltage	B_{VCBO}	I_C=10μA, I_E= 0	60		V
Emitter Base Breakdown Voltage	B_{VEBO}	I_E=10μA, I_C=0	5		V
Collector Cutoff Current	I_{CBO}	V_{CB}=50V, I_E=0		20	nA
		V_{CB}=50V, I_E=0,		20	μA
		Ta=150°C			μA
Collector Cutoff Current	I_{CEX}	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



TO-18
Metal Can Package

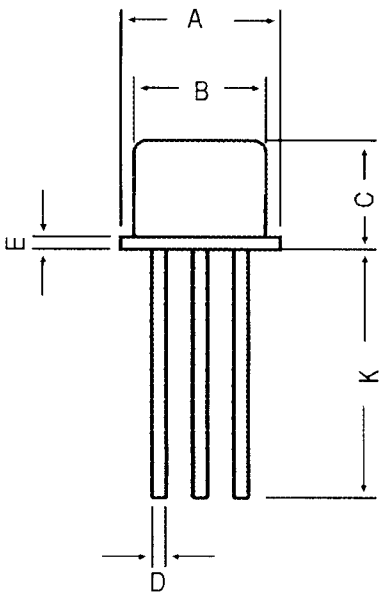
ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

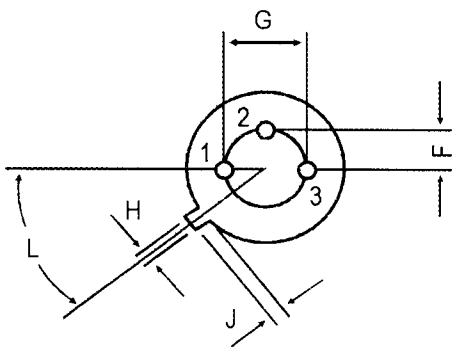
DESCRIPTION	SYMBOL	TEST CONDITION	2N2906		2N2907		UNITS
			MIN	MAX	MIN	MAX	
DC Current Gain	h_{FE}	I_C=0.1mA, V_{CE}=10V	20		35		
		I_C=1mA, V_{CE}=10V	25		50		
		I_C=10mA, V_{CE}=10V	35		75		
		I_C=150mA, V_{CE}=10V *	40	120	100	300	
		I_C=500mA, V_{CE}=10V *	20		30		

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
DYNAMIC CHARACTERISTICS					
Transition Frequency	f_T	I_C=50mA, V_{CE}=20V f=100MHz	200		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=100KHz		8	pF
Input Capacitance	C_{ib}	V_{BE}=2V, I_C=0, f=100KHz		30	pF
SWITCHING CHARACTERISTICS					
Delay time	t_d			10	ns
Rise time	t_r	I_C=150mA,I_{B1}=15mA V_{CC}=30V		40	ns
Turn on Time	t_{on}			45	ns
Storage time	t_s			80	ns
Fall time	t_f	I_C=150mA, I_{B1}=I_{B2}=15mA,		30	ns
Turn Off Time	t_{off}	V_{CE}=6V		100	ns

***Pulse Test: Lenghth ≤300μs, Duty Cycle ≤ 2%**

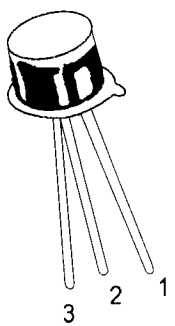
TO-18 Metal Can Package





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