



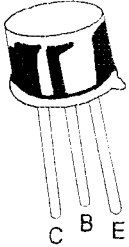
SOLID STATE INC.

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NPN SILICON PLANAR TRANSISTOR

2N1711



TO-39
Metal Can Package

N-P-N Double Diffused Transistor in a TO-39 Metal Package for a Wide Variety of Applications Such As d.c. and Wideband Amplifiers.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)

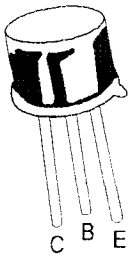
DESCRIPTION	SYMBOL	2N1711	UNITS
Collector Emitter Voltage(RBE<10Ω)	V_{CER}	130	V
Collector Base Voltage	V_{CBO}	75	V
Emitter Base Voltage	V_{EBO}	7.0	V
Collector Current(Peak Value)	I_{CM}	1.0	A
Power Dissipation @ Ta=25°C	P_{tot}	0.8	W
Power Dissipation@ Tc=100°C	P_{tot}	1.7	W
Power Dissipation@ Tc=25°C	P_{tot}	3	W
Junction Temperature	T_j	200	°C
Storage Temperature	T_{stg}	-65 to +200	°C
Lead Soldering Temperature >1.5mm from the seating plane;tsld<10s	T_{sld}	300	°C

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter(Sus) Voltage	$BV_{CER(sus)}$	$I_C=100mA, I_B=0, R_{BE}<10\Omega$	50		V
Collector Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	75		V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	7		V
Collector Cut off Current	I_{CBO}	$V_{CB}=60V, I_E=0$		10	nA
		$V_{CB}=60V, I_E=0, T_a=150^\circ C$		10	μA
Emitter Cut off Current	I_{EBO}	$V_{EB}=5V, I_C=0$		5	nA
DC Current Gain	h_{FE}	$I_C=10\mu A, V_{CE}=10V$	20		
		$I_C=1mA, V_{CE}=10V$	35		
		$I_C=10mA, V_{CE}=10V^*$	75		
		$I_C=10mA, V_{CE}=10V.$	35		
		$T_a=-55^\circ C$			
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=150mA, I_B=15mA$		0.5	V
		$I_C=500mA, V_{CE}=10V^*$	100	300	
Base Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C=150mA, I_B=15mA$		1.3	V

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**TO-39
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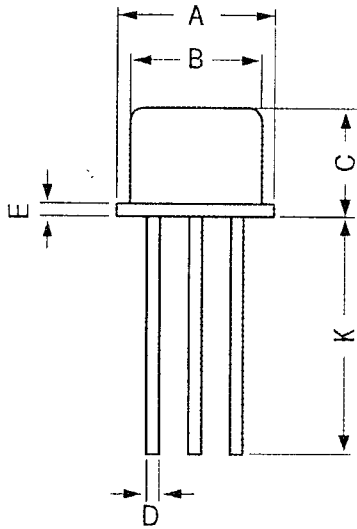
ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
<u>SMALL SIGNAL CHARACTERISTICS</u>					
Small Signal Current Gain	h _{fe}	I _C =1mA, V _{CE} =5V, I _C =5mA, V _{CE} =10V,	30	200	
Collector Capacitance	C _c	V _{CB} =10V, I _E =0, f=1MHz		25	pF
Emitter Capacitance	C _e	V _{CB} =0.5V, I _C =0, f=1MHz		80	pF
Transition Frequency	f _T	I _C =50mA, V _{CE} =10V f=20MHz	70		MHz
Noise Figure	NF	V _{CE} =10V, I _C =300μA, R _S =510Ω, B=1kHz		8.0	dB
* Measured under pulse conditions to avoid excessive dissipation : tp<300μs; Duty cycle<0.02					

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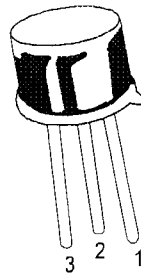
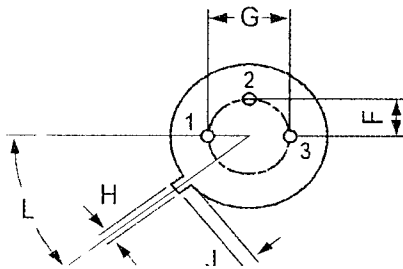
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All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR