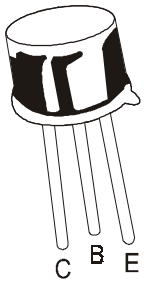
NPN SILICON PLANAR TRANSISTOR

2N1711



TO-39
Metal Can Package

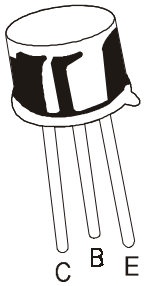
N-P-N Double Diffused Transistor in a TO-39 Metal Package for a Wide Variety of Applications Such As d.c. and Wideband Amplifiers.

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC 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=25ºC	P_{tot}	0.8	W
Power Dissipation@ Tc=100ºC	P_{tot}	1.7	W
Power Dissipation@ Tc=25ºC	P_{tot}	3	W
Junction Temperature	T_j	200	ºC
Storage Temperature	Tstg	-65 to +200	ºC
Lead Soldering Temperature >1.5mm from the seating plane;tsld<10s	Tsld	300	ºC

ELECTRICAL CHARACTERISTICS (Ta=25º 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}<10Ω	50		V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=100µA, I_E =0	75		V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=100µA, 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, Ta=150ºC		10	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0		5	nA
DC Current Gain	h_{FE}	I_C=10µA,V_{CE}=10V	20		
		I_C=1mA,V_{CE}=10V	35		
		I_C=10mA, V_{CE} =10V*	75		
		I_C=10mA,V_{CE}=10V, Ta=-55ºC	35		
		I_C=150mA, V_{CE} =10V*	100	300	
		I_C=500mA, V_{CE}=10V*	40		
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$ *	I_C=150mA,I_B=15mA		0.5	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$ *	I_C=150mA,I_B=15mA		1.3	V



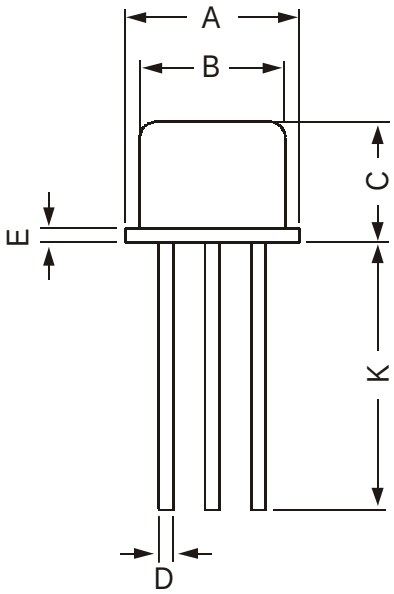
TO-39
Metal Can Package

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
SMALL SIGNAL CHARACTERISTICS					
Small Signal Current Gain	$\lvert h_{fe} \rvert$	I_C=1mA, V_{CE}=5V,	30	200	
		I_C=5mA, V_{CE}=10V,	70	300	
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

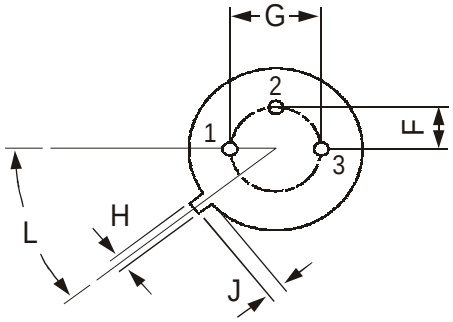
*** Measured under pulse conditions to avoid excessive dessipation : tp<300µs; Duty cycle<0.02**

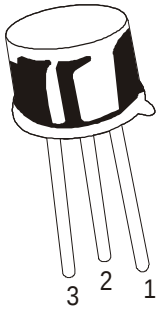
TO-39 Metal Can Package



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

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 kgs

TO-39
Metal Can Package

Disclaimer

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