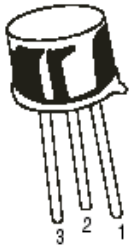
Transistor
PNP, TO-19



Pin Configuration
1. Emitter
2. Base
3. Collector

Features:

- PNP Silicon Planar Switching Transistor
- Fast switching devices exhibiting short turn-off and low saturation voltage characteristics
- Switching And Linear Application DC to VHF Amplifier Applications

Absolute Maximum Ratings:

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	60	V
Collector-Base Voltage	V_{CBO}		
Emitter-Base Voltage	V_{EBO}	5	
Collector Current Continuous	I_C	600	mA
Power Dissipation at T_a = 25°C Derate above 25°C	P_D	600 3.43	mW mW/°C
Power Dissipation at T_c = 25°C Derate above 25°C		3 17.2	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200	°C

Electrical Characteristics: (T_a = +25°C unless otherwise specified)

Parameter	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 = 10µA, I_E = 0		-	
Emitter-Base Voltage	V_{EBO}	I_E = 10µA, I_C = 0	5	-	
Collector-Cut off Current	I_{CBO} I_{CEX}	V_{CB} = 50V, I_E = 0 T_A = 150°C V_{CB} = 50V, I_E = 0 V_{CE} = 30V, V_{BE} = 0.5V	-	10 10 50	nA µA 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
Base Emitter Saturation Voltage	$V_{BE(sat)}$*	I_C = 150mA, I_B = 15mA I_C = 500mA, I_B = 50mA	-	1.3 2.6	
DC Current Gain	h_{FE}	I_C = 0.1mA, V_{CE} = 10V I_C = 1mA, V_{CE} = 10V I_C = 10mA, V_{CE} = 10V I_C = 150mA, V_{CE} = 10V* I_C = 500mA, V_{CE} = 10V*	>75 >100 >100 100 - 300 >50	-	-

Dynamic Characteristics

Transition Frequency	ft**	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	

Switching Time

Delay Time	t_d	I_C = 150mA, I_{B1} = 15mA	-	10	ns
Rise Time	t_r	V_{CC} = 30V	-	40	
Turn-on Time	t_{on}	-	-	45	
Storage time	t_s	I_C = 150mA, I_{B1} = I_{B2} = 15mA	-	80	
Fall Time	t_f	V_{CC} = 6V	-	30	
Turn-off Time	t_{off}	-	-	100	

Pulse Test: Pulse Width = 300µs, Duty Cycle = 2%.

** ft is defined as the frequency at which /hfe/ extrapolates to unity.

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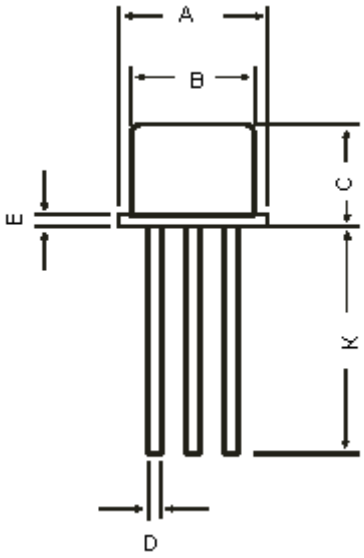
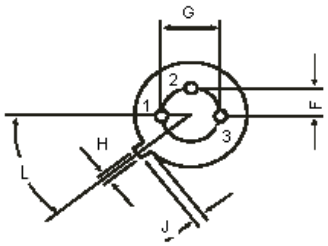
TO-39 Metal Can Package





Dimensions	Min.	Max.
A	8.5	9.39
B	7.74	8.5
C	6.09	6.6
D	0.4	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	12.7	-
L	42°	48°

Dimensions : Millimetres

Pin Configuration

1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, PNP, TO-39	2N2905A