



Micro Commercial Components



Micro Commercial Components
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2N2905A

Features

- General-purpose Transistor for Switching and Amplifier Applications
- Housed in a TO-39 Case
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

PNP General Purpose Amplifier

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current, Continuous	600	mA
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

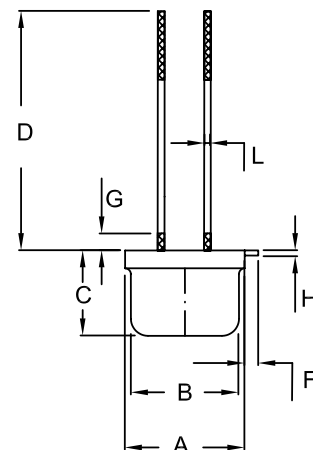
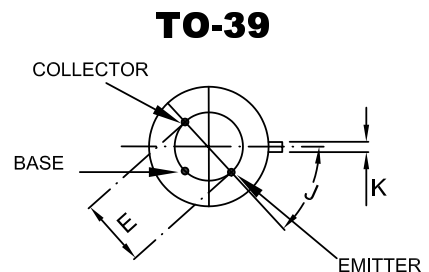
Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ($I_C=10\text{mA}$, $I_B=0$)	60	70	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\text{mA}$, $I_E=0$)	60	100	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\text{mA}$, $I_C=0$)	5.0	9.0	---	Vdc
I_{CES}	Collector-Emitter Cutoff Current ($V_{CE}=30\text{Vdc}$)	---	1.0	50	nA
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=50\text{Vdc}$)	---	0.25	10	nA
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=3.5\text{Vdc}$)	---	0.1	50	nA

ON CHARACTERISTICS

h_{FE}	DC Current Gain* ($I_C=100\mu\text{A}$, $V_{CE}=10\text{Vdc}$) ($I_C=1.0\text{mA}$, $V_{CE}=10\text{Vdc}$) ($I_C=10\text{mA}$, $V_{CE}=10\text{Vdc}$) ($I_C=150\text{mA}$, $V_{CE}=10\text{Vdc}$) ($I_C=500\text{mA}$, $V_{CE}=10\text{Vdc}$)	75 100 100 100 50	225 250 ---	450 ---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=150\text{mA}$, $I_B=15\text{mA}$) ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	0.18 0.5	0.4 1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=150\text{mA}$, $I_B=15\text{mA}$) ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	0.87 1.0	1.3 2.6	Vdc



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.335	.370	8.509	9.40	Φ
B	.305	.335	7.747	8.509	Φ
C	.240	.260	6.096	6.604	
D	.50	.75	12.7	19.05	
E	.200		5.08		ΦTYP
F	.029	.045	7.366	11.43	
G	----	.050	----	1.27	
H	.009	.031	0.229	7.874	
J	44°	46°	44°	46°	
K	.028	.034	0.711	0.864	
L	.016	.021	0.406	0.533	

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

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Symbol	Parameter	Min	Typ	Max	Units
SMALL-SIGNAL CHARACTERISTICS					
AC h_{FE}	Short Circuit Current Transfer Ratio ($I_C=1.0\text{mA}$, $V_{CE}=10\text{Vdc}$, $f=1.0\text{kHz}$)	100	250	---	---
C_{OBO}	Open Circuit Output Capacitance ($V_{CB}=10\text{Vdc}$, $I_E=0$, $100\text{kHz}<f<1.0\text{MHz}$)	---	6.0	8.0	pF
C_{IBO}	Input Capacitance, Output Open Circuited ($V_{EB}=2.0\text{Vdc}$, $I_C=0$, $100\text{kHz}<f<1.0\text{MHz}$)	---	8.0	30.0	pF
SWITCHING CHARACTERISTICS					
t_{ON}	Saturated Turn On Switching Time to 90% 16V, 50 ohm input pulse	---	25	45	ns
t_{OFF}	Saturated Turn Off Switching Time to 10% 16V, 50 ohm input pulse	---	200	300	ns

Ordering Information :

Device	Packing
Part Number-BP	Bulk; 50pcs/Box

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