

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)

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
--------	-----------	-----	-----	-----	-------

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	nAdc
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=50\text{Vdc}$)	---	0.25	10	nAdc
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=3.5\text{Vdc}$)	---	0.1	50	nAdc

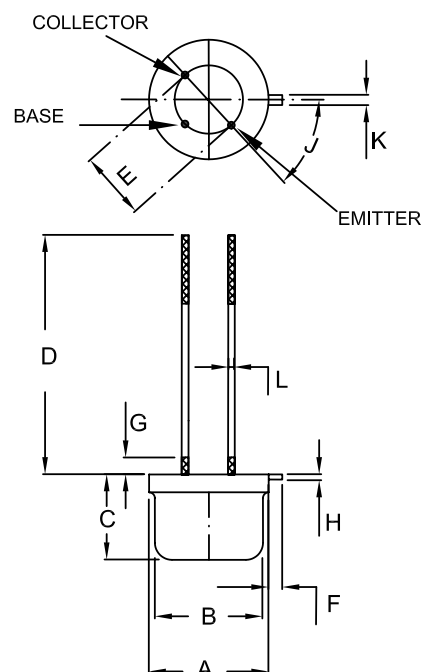
ON CHARACTERISTICS

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 ---	---	---
$V_{CE(sat)}$	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

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

PNP General Purpose Amplifier

TO-39



DIMENSIONS

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	

2N2905A

Symbol	Parameter	Min	Typ	Max	Units
SMALL-SIGNAL CHARACTERISTICS					
AC h_{FE}	Short Circuit Current Transfer Ratio ($I_C=1.0mA$, $V_{CE}=10V$, $f=1.0kHz$)	100	250	---	---
C_{OBO}	Open Circuit Output Capacitance ($V_{CB}=10V$, $I_E=0$, $100kHz < f < 1.0MHz$)	---	6.0	8.0	pF
C_{IBO}	Input Capacitance, Output Open Circuited ($V_{EB}=2.0V$, $I_C=0$, $100kHz < f < 1.0MHz$)	---	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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.