



**Micro Commercial Components** 

Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

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## **Features**

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1

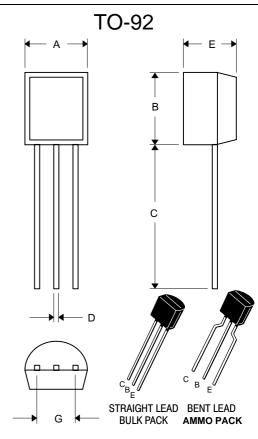
## **Maximum Ratings**

- Operating temperature : -55°C to +150°C
- Storage temperature : -55°C to +150°C

## Electrical Characteristics @ $25^{\circ}$ C Unless Otherwise Specified

Symbol	Parameter	Value	Unit	
V <sub>CEO</sub>	Collector-Emitter Voltage	45	٧	
V <sub>EBO</sub>	Emitter-Base Voltage	-Base Voltage 6		
Ic	Collector Current -Continuous	0.1	Α	
Pc	Collector Power Dissipation	350	mW	
RθJA	Thermal Resistance, Junction to Ambient	357	°C/W	
R0JC	Thermal Resistance, Junction to Case	125	°C/W	
T <sub>j</sub>	Junction Temperature 150		°C	
T <sub>stg</sub>	Storage Temperature	°C		

# NPN Plastic-Encapsulate Transistors



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
Α	.175	.185	4.45	4.70	
В	.175	.185	4.45	4.70	
С	.500		12.70		
D	.016	.020	0.41	0.63	
Е	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
G	.173	.220	4.40	5.60	Bent Lead

<sup>\*</sup> For ammo packing detailed specification, click here to visit our website of product packaging for details.



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

Parameter	Symbol	Test conditions	Min	Тур	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	50			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	$I_C=2mA$ , $I_B=0$	45			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CE</sub> =50V, V <sub>BE</sub> =0			15	nA
	h <sub>FE(1)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10μA BC237A BC237B BC237C		90 150 270		
DC current gain	h <sub>FE(2)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA  BC237A  BC237B  BC237C	120 120 200 380		800 220 460 800	
	h <sub>FE(3)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =100mA BC237A BC237B BC237C		120 180 300		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C$ =10mA, $I_B$ =0.5mA $I_C$ =100mA, $I_B$ =5mA			0.2 0.6	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA,I <sub>B</sub> =0.5mA I <sub>C</sub> =100mA,I <sub>B</sub> =5mA			0.83 1.05	V
Base-emitter voltage V <sub>BE</sub>		$V_{CE}$ =5V, $I_{C}$ =0.1mA $V_{CE}$ =5V, $I_{C}$ =2mA $V_{CE}$ =5V, $I_{C}$ =100mA	0.55	0.5	0.7	<b>&gt;</b>
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =3V,I <sub>C</sub> =0.5mA,f=100MHz V <sub>CE</sub> =5V,I <sub>C</sub> =10mA,f=100MHz		100 200		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			4.5	pF
Emitter-base capacitance	C <sub>ib</sub>	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1MHz		8		Pf
Noise figure	NF	$V_{CE}$ =5V, $I_c$ =0.2mA, f=1kHZ, Rs=2KΩ, $\Delta$ f=200Hz		2	10	dB



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### **Ordering Information:**

Device	Packing		
Part Number-AP	Ammo Packing: 20Kpcs/Carton		
Part Number-BP	Bulk: 100Kpcs/Carton		

Note: Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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