



Micro Commercial Components

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# TIP47

## Features

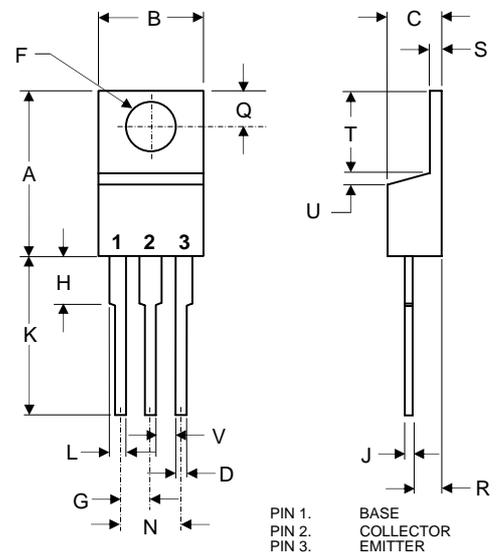
- Halogen free available upon request by adding suffix "-HF"
- Mounting Torque: 5 in-lbs Maximum
- Lead Free Finish/RoHS Compliant(Note 1)("P" Suffix designates RoHS Compliant. See ordering information)
- Silicon Power NPN transistors in TO-220 package.
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CBO}$	Collector-Base Voltage	350	V
$V_{CEO}$	Collector-Emitter Voltage	250	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	1.0	A
$I_{CM}$	Collector Current Peak	2.0	A
$I_B$	Base Current	0.6	A
$P_D$	Collector power dissipation( $T_C=25^\circ\text{C}$ )	40	W
	Collector power dissipation( $T_A=25^\circ\text{C}$ )	2	
$T_J$	Junction Temperature	-65 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 to +150	$^\circ\text{C}$
$R_{thjc}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C}/\text{W}$
$R_{thja}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ\text{C}/\text{W}$

## NPN Silicon Power Transistors

### TO-220



## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage $I_C=30\text{mA}; I_B=0$	250	---	Vdc
$V_{CE(Sat)}$	Collector-Emitter Saturation Voltage $I_C=1\text{A}; I_B=0.2\text{A}$	1.0	---	Vdc
$V_{BE(ON)}$	Base-Emitter On Voltage $I_C=1\text{A}; V_{CE}=10\text{V}$	1.5	---	Vdc
$I_{CES}$	Collector Cutoff Current ( $V_{CE}=350\text{Vdc}; V_{BE}=0$ )	---	1.0	mAdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0\text{Vdc}; I_C=0$ )	---	1.0	mAdc
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=150\text{Vdc}; I_B=0$ )	---	1.0	mAdc
$h_{FE-1}$	DC Current Gain ( $I_C=0.3\text{Adc}; V_{CE}=10\text{Vdc}$ )	30	150	
$h_{FE-2}$	DC Current Gain ( $I_C=1.0\text{Adc}; V_{CE}=10\text{Vdc}$ )	10		
$f_T$	Current Gain-Bandwidth Product ( $I_C=0.1\text{Adc}; V_{CE}=10\text{Vdc}$ )	10		MHz

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	∅
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	-----	.050	-----	1.27	
V	.045	-----	1.15	-----	



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### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1Kpcs/Box

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

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