



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



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**2N2907**  
**2N2907A**

## Features

- High current (max.600mA)
- Low voltage (max.60V)
- 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 2N2907 2N2907A	40 60	V
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current (DC)	600	mA
$I_{CM}$	Peak Collector Current	800	mA
$I_{BM}$	Peak Base Current	200	mA
$T_J$	Operating Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Thermal Characteristics

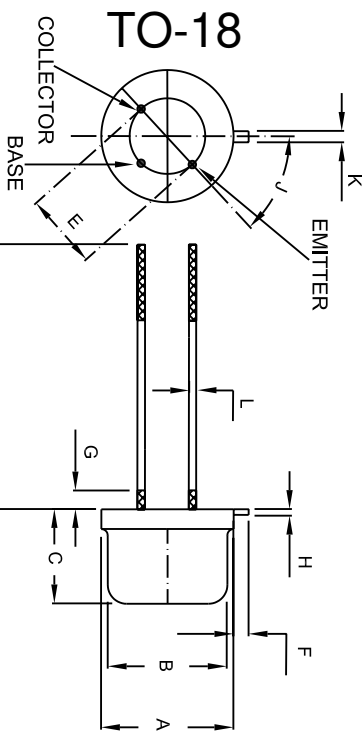
Symbol	Rating	Max	Unit
$P_{tot}$	Total power Dissipation $T_A \leq 25^\circ\text{C}$ $T_C \leq 25^\circ\text{C}$	400 1.2	mW W
$R_{JC}$	Thermal Resistance, Junction to Case	146	K/W
$R_{JA}$	Thermal Resistance, Junction to Ambient	350	K/W

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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### OFF CHARACTERISTICS

$I_{CBO}$	Collector cut-off current ( $V_{CB}=50\text{Vdc}$ , $I_E=0$ )	2N2907	---	20	nAdc
		2N2907	---	20	uAdc
		2N2907A	---	10	nAdc
		2N2907A	---	10	uAdc
$I_{EBO}$	Emitter Cut-off current ( $I_C=0$ , $V_{EB}=5.0\text{Vdc}$ )		---	50	nAdc
$h_{FE}$	DC Current Gain ( $I_C=0.1\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=1.0\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=10\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=150\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ )* ( $I_C=500\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ )*	2N2907	35	300	
		2N2907	50		
		2N2907	75		
		2N2907	100		
		2N2907	30		
$h_{FE}$	DC Current Gain ( $I_C=0.1\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=1.0\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=10\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ ) ( $I_C=150\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ )* ( $I_C=500\text{mAdc}$ , $V_{CE}=10\text{Vdc}$ )*	2N2907A	75	300	
		2N2907A	100		
		2N2907A	100		
		2N2907A	100		
		2N2907A	50		



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.209	.230	5.309	5.842	Φ
B	.178	.195	4.521	4.953	Φ
C	.170	.210	4.318	5.334	
D	.50	.75	12.7	19.05	
E	.100		2.54		ΦTYP
F	.028	.048	7.112	1.219	
G	-----	.050	-----	1.27	
H	.009	.031	0.229	0.787	
J	44°	46°	44°	46°	
K	.036	.046	0.914	1.168	
L	.016	.021	0.406	0.533	

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

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2N2907,2N2907A

Symbol	Parameter	Min	Max	Units
<b>ON CHARACTERISTICS*</b>				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage* ( $I_C=150mA$ , $I_B=15mA$ ) ( $I_C=500mA$ , $I_B=50mA$ )	---	400	mVdc
		---	1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage * ( $I_C=150mA$ , $I_B=15mA$ ) ( $I_C=500mA$ , $I_B=50mA$ )	---	1.3	Vdc
		---	2.6	Vdc
<b>SMALL-SIGNAL CHARACTERISTICS</b>				
$C_{OB}$	Output Capacitance ( $V_{CB}=10Vdc$ , $I_E=I_C=0$ , $f=1.0MHz$ )	---	8.0	pF
$f_T$	Transistor Frequency* ( $I_C=50mA$ , $V_{CE}=20Vdc$ , $f=100MHz$ )	200	---	MHz
<b>SWITCHING CHARACTERISTICS</b>				
$T_d$	Delay Time	---	15	ns
$t_r$	Rise Time	---	35	ns
$t_s$	Storage Time	---	250	ns
$t_f$	Fall Time	---	50	ns

\* Pulse Test:  $t_p \leq 300\mu s$ , Duty Cycle  $\leq 2.0\%$



Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-BP	Bulk; 100 pcs/Box

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