

**Obsolete****M·C·C·**

Micro Commercial Components



Micro Commercial Components  
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## 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

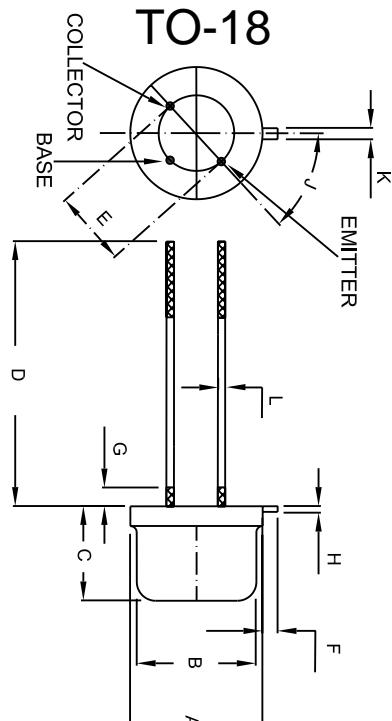
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units	
<b>OFF CHARACTERISTICS</b>					
$I_{CBO}$	Collector cut-off current ( $V_{CB}=50\text{Vdc}$ , $I_E=0$ ) ( $V_{CB}=50\text{Vdc}$ , $I_E=0, T_A=150^\circ\text{C}$ ) ( $V_{CB}=50\text{Vdc}$ , $I_E=0$ ) ( $V_{CB}=50\text{Vdc}$ , $I_E=0, T_A=150^\circ\text{C}$ )	2N2907 2N2907A	---	20 20 10 10	nAdc μAdc nAdc μAdc
$I_{EBO}$	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 2N2907A	35 50 75 100 30 75 100 100 50	300	

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

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

## PNP Switching Transistors



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	Φ TYP
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	

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2N2907,2N2907A

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

\* Pulse Test:  $t_p \leq 300\text{us}$ , Duty Cycle  $\leq 2.0\%$

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## Ordering Information :

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

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