



Micro Commercial Components



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

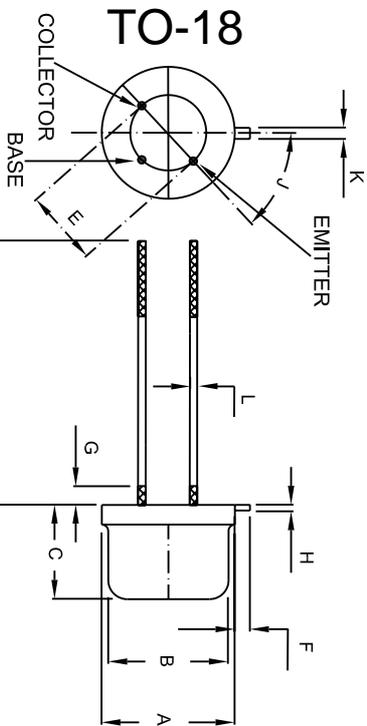
Symbol	Rating	Max	Unit
P _{tot}	Total power Dissipation T _A ≤ 25°C T _C ≤ 25°C	400 1.2	mW W
R _{JC}	Thermal Resistance, Junction to Case	146	K/W
R _{JA}	Thermal Resistance, Junction to Ambient	350	K/W

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} =50Vdc, I _E =0)	2N2907	---	20	nAdc
	(V _{CB} =50Vdc, I _E =0, T _A =150°C)	2N2907A	---	10	uAdc
I _{EBO}	Emitter Cut-off current (I _C =0, V _{EB} =5.0Vdc)	2N2907	---	50	nAdc
		2N2907A	---	50	nAdc
h _{FE}	DC Current Gain (I _C =0.1mAdc, V _{CE} =10Vdc) (I _C =1.0mAdc, V _{CE} =10Vdc) (I _C =10mAdc, V _{CE} =10Vdc) (I _C =150mAdc, V _{CE} =10Vdc)* (I _C =500mAdc, V _{CE} =10Vdc)*	2N2907	35	300	
		2N2907	50		
		2N2907	75		
		2N2907	100		
		2N2907	30		
h _{FE}	DC Current Gain (I _C =0.1mAdc, V _{CE} =10Vdc) (I _C =1.0mAdc, V _{CE} =10Vdc) (I _C =10mAdc, V _{CE} =10Vdc) (I _C =150mAdc, V _{CE} =10Vdc)* (I _C =500mAdc, V _{CE} =10Vdc)*	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.

2N2907,2N2907A



Symbol	Parameter	Min	Max	Units
ON CHARACTERISTICS*				
$V_{CE(sat)}$	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	mVdc
		---	1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage * ($I_C=150\text{mA}$, $I_B=15\text{mA}$) ($I_C=500\text{mA}$, $I_B=50\text{mA}$)	---	1.3	Vdc
		---	2.6	Vdc
SMALL-SIGNAL CHARACTERISTICS				
C_{OB}	Output Capacitance ($V_{CB}=10\text{Vdc}$, $I_E=I_C=0$, $f=1.0\text{MHz}$)	---	8.0	pF
f_T	Transistor Frequency* ($I_C=50\text{mA}$, $V_{CE}=20\text{Vdc}$, $f=100\text{MHz}$)	200	---	MHz
SWITCHING CHARACTERISTICS				
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: $t_p \leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$



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Ordering Information :

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

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