



Micro Commercial Components

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2SA1012

PNP Plastic-Encapsulate Transistor

Features

- Capable of 25 Watts of Power Dissipation.
- Collector-current -5.0A and Collector-base Voltage -60V
- Operating and storage junction temperature range: -55°C to +150°C
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=-1.0mA_{dc}$, $I_B=0$)	-50	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=-1mA_{dc}$, $I_E=0$)	-60	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=-0.1mA_{dc}$, $I_C=0$)	-5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=-50V_{dc}$, $I_E=0$)	---	-1.0	μA_{dc}
I_{EBO}	Emitter Cutoff Current ($V_{EB}=-5.0V_{dc}$, $I_C=0$)	---	-1.0	μA_{dc}

ON CHARACTERISTICS

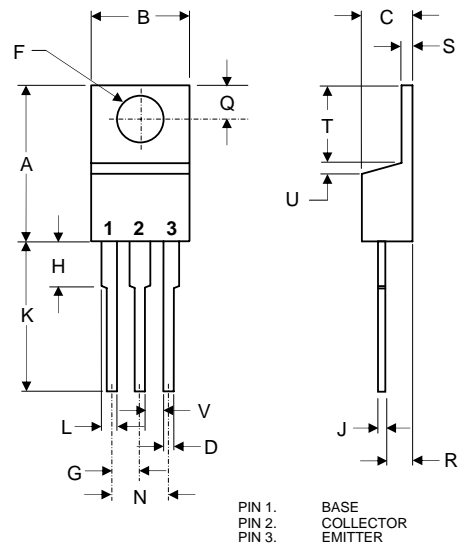
$h_{FE(1)}$	DC Current Gain (Note 2) ($I_C=-1A_{dc}$, $V_{CE}=-1V_{dc}$)	70	240	---
$h_{FE(2)}$	DC Current Gain ($I_C=-3A_{dc}$, $V_{CE}=-1V_{dc}$)	30	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=-3A_{dc}$, $I_B=-150mA_{dc}$)	-0.2	-0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=-3A_{dc}$, $I_B=-150mA_{dc}$)	-0.9	-1.2	Vdc

SMALL-SIGNAL CHARACTERISTICS

f_T	Transistor Frequency ($I_C=-1A_{dc}$, $V_{CE}=-4V_{dc}$)	60	---	MHz
C_{ob}	Collector output capacitance ($V_{CB}=-10V$, $I_E=0$, $f=1MHz$)	170(Typ)	---	PF

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.
2. $h_{FE(1)}$ Classification O : 70-140, Y : 120-240

TO-220AB



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 (Part Number)-BP	Packing Bulk;1Kpcs/Box
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