



2SA1013-R
2SA1013-O
2SA1013-Y

PNP
Epitaxial Silicon
Transistor

Features

- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 0.9Watts of Power Dissipation.
- Collector-current -1.0A
- Collector-base Voltage -160V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=-1.0mA, I_B=0$)	-160	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=-100\mu A, I_E=0$)	-160	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=-10mA, I_C=0$)	-6.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=-150Vdc, I_E=0$)	---	-1.0	μA
I_{CEO}	Collector Cutoff Current ($V_{CB}=-120Vdc, I_E=0$)	---	-10	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=-6.0Vdc, I_C=0$)	---	-1.0	μA

ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ($I_C=-200mA, V_{CE}=-5.0Vdc$)	65	310	---
$h_{FE(2)}$	DC Current Gain ($I_C=-50mA, V_{CE}=-5.0Vdc$)	40	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=-500mA, I_B=-50mA$)	---	-1.5	Vdc
V_{BE}	Base-Emitter Saturation Voltage ($I_C=-5.0mA, V_{CE}=-5.0Vdc$)	---	-0.75	Vdc

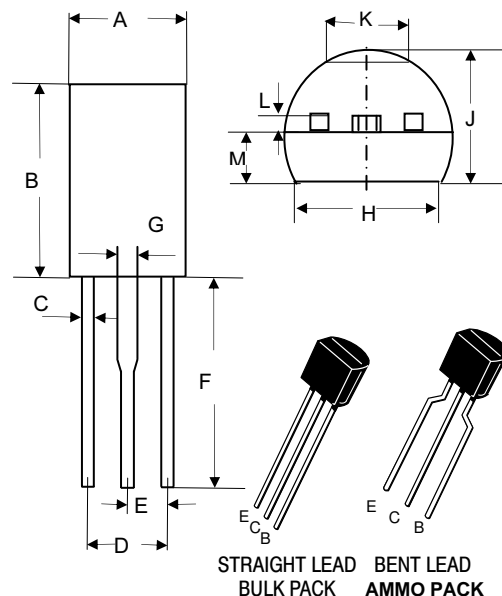
SMALL-SIGNAL CHARACTERISTICS

f_T	Transistor Frequency ($I_C=-200mA, V_{CE}=-5.0Vdc, f=30MHz$)	-15	---	MHz
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CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y
Range	60-120	120-200	200-300

TO-92MOD



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.228	.244	5.80	6.20	
B	.331	.346	8.40	8.80	
C	.016	.024	0.40	0.60	
D	.114	.122	2.90	3.10	Straight Lead
	.173	.220	4.40	5.60	Bent Lead
E	.059		1.50		Straight Lead
	.086	.110	2.20	2.80	Bent Lead
F	.543	.559	13.80	14.20	
G	.035	.043	0.90	1.10	
H	.157	---	4.00	---	
J	.185	.201	4.70	5.10	
K	---	.063	---	1.60	
L	.016	.020	0.40	0.50	
M	.068	.080	1.73	2.03	

* For ammo packing detailed specification, click here to visit our website of product packaging for details.



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Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 50Kpcs/Carton

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

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