2N5820 2N5822 NPN
2N5821 2N5823 PNP

COMPLEMENTARY SILICON TRANSISTORS

TO-92-18R CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5820 series devices are epoxy molded complementary silicon small signal transistors manufactured by the epitaxial planar process designed for general purpose amplifier applications where a high collector current rating is required.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	70	V
Collector-Emitter Voltage	V_{CES}	70	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Continuous Collector Current	I_C	750	mA
Peak Collector Current	I_{CM}	1.0	A
Power Dissipation	P_D	625	mW
Power Dissipation (T_C=25°C)	P_D	1.5	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	200	°C/W
Thermal Resistance	Θ_{JC}	83.3	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	V_{CB}=25V		100	nA
I_{CBO}	V_{CB}=25V, T_A=100°C		15	µA
I_{EBO}	V_{EB}=5.0V		10	µA
BV_{CES}	I_C=10µA	70		V
BV_{CEO}	I_C=10mA	60		V
BV_{EBO}	I_E=10µA	5.0		V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		0.75	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA		1.2	V
$V_{BE(ON)}$	V_{CE}=2.0V, I_C=500mA	0.6	1.1	V
h_{FE}	V_{CE}=2.0V, I_C=2.0mA (2N5820, 21)	60	120	
h_{FE}	V_{CE}=2.0V, I_C=2.0mA (2N5822, 23)	100	250	
h_{FE}	V_{CE}=2.0V, I_C=500mA (2N5820, 21)	20		
h_{FE}	V_{CE}=2.0V, I_C=500mA (2N5822, 23)	25		
f_T	V_{CE}=2.0V, I_C=50mA, f=20MHz (2N5820, 21)	100		MHz
f_T	V_{CE}=2.0V, I_C=50mA, f=20MHz (2N5822, 23)	120		MHz
C_{ob}	V_{CB}=10V, I_C=0, f=1.0MHz		15	pF
C_{ib}	V_{EB}=0.5V, I_E=0, f=1.0MHz		55	pF

R2 (17-November 2014)

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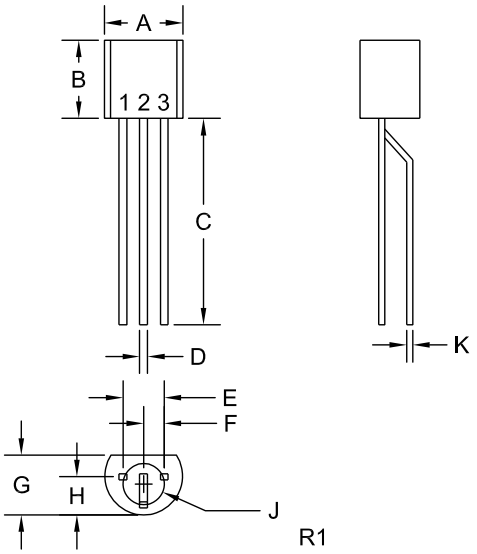
COMPLEMENTARY
SILICON TRANSISTORS

TO-92-18R CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
J (DIA)	0.100		2.54	
K	0.015		0.38	

TO-92-18R (REV: R1)

LEAD CODE:
1) Collector
2) Base
3) Emitter

MARKING:
FULL PART NUMBER

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors