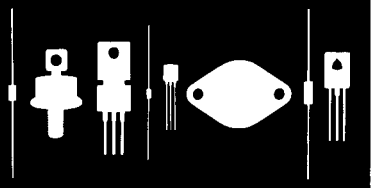
Central
Semiconductor Corp.
145 Adams Avenue
Hauppauge, New York 11788



2N5961
2N5962
2N5963

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5961 Series types are Epoxy Molded Silicon NPN Transistors manufactured by the epitaxial Planar Process designed for applications requiring extremely high gain (h_{FE}) and low noise.

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

	SYMBOL	2N5961	2N5962	2N5963	UNIT
Collector-Base Voltage	V_{CBO}	60	45	30	V
Collector-Emitter Voltage	V_{CEO}	60	45	30	V
Emitter-Base Voltage	V_{EBO}		8.0		V
Collector Current	I_C		50		mA
Power Dissipation	P_D		625		mW
Power Dissipation (T_C=25°C)	P_D		1500		mW
Operating and Storage Junction Temperature	T_J,T_{STG}		-65 TO +150		°C

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

SYMBOL	TEST CONDITIONS	2N5961 MIN	2N5961 MAX	2N5962 MIN	2N5962 MAX	2N5963 MIN	2N5963 MAX	UNIT
I_{CBO}	V_{CB}=Rated V_{CBO}		2.0		2.0		2.0	nA
I_{CBO}	V_{CB}=Rated V_{CBO}, T_A=65°C		50		50		50	nA
I_{EBO}	V_{EB}=5.0V		1.0		1.0		1.0	nA
BV_{CBO}	I_C=10μA	60		45		30		V
BV_{CEO}	I_C=5.0mA	60		45		30		V
BV_{EBO}	I_C=10μA	8.0		8.0		8.0		V
$V_{CE(SAT)}$	I_C=10mA, I_B=0.5mA, PW=300μs		0.2		0.2		0.2	V
$V_{BE(ON)}$	V_{CE}=5.0V, I_C=1.0mA	0.5	0.7	0.5	0.7	0.5	0.7	V
h_{FE}	V_{CE}=5.0V, I_C=10μA	100		450		900		
h_{FE}	V_{CE}=5.0V, I_C=100μA	120		500		1000		
h_{FE}	V_{CE}=5.0V, I_C=1.0mA	135		550		1200		
h_{FE}	V_{CE}=5.0V, I_C=10mA	150	700	600	1400	1200	2200	
h_{fe}	V_{CE}=5.0V, I_C=10mA, f=1.0kHz	150	1000	600	2000	1200	3000	
f_T	V_{CE}=5.0V, I_C=10mA, f=100MHz	100		100		150		MHz
C_{ob}	V_{CB}=5.0V, I_E=0		4.0		4.0		4.0	pF
C_{ib}	V_{EB}=0.5V, I_C=0		6.0		6.0		6.0	pF
NF	V_{CE}=5.0V, I_C=100μA, R_S=1.0kΩ, BW=400Hz, f=1.0kHz		6.0		6.0		6.0	dB
NF	V_{CE}=5.0V, I_C=100μA, R_S=10kΩ, BW=400Hz, f=1.0kHz		-		4.0		3.0	dB
NF	V_{CE}=5.0V, I_C=100μA, R_S=100kΩ, BW=400Hz, f=1.0kHz		-		8.0		6.0	dB
NF	V_{CE}=5.0V, I_C=10μA, R_S=10kΩ, BW=400Hz, f=1.0kHz		3.0		3.0		3.0	dB
NF	V_{CE}=5.0V, I_C=100μA, R_S=1.0KΩ, BW=10Hz, f=10Hz		-		-		8.0	dB
*NF	V_{CE}=5.0V, I_C=10μA, R_S=1.0kΩ, BW=15.7kHz, f=10Hz to 10kHz		3.0		3.0		3.0	dB

Tel: (631) 435-1110 • Fax: (631) 435-1824
www.centralsemi.com

*WIDE BAND NOISE FIGURE

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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

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