2N5320 2N5321 NPN
2N5322 2N5323 PNP

COMPLEMENTARY SILICON SWITCHING TRANSISTORS

TO-39 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5320, 2N5322 series types are complementary silicon power transistors manufactured by the epitaxial planar process, designed for amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N5320 2N5322**	**2N5321 2N5323**	**UNITS**
Collector-Base Voltage	V_{CBO}	100	75	V
Collector-Emitter Voltage	V_{CEV}	100	75	V
Collector-Emitter Voltage	V_{CEO}	75	50	V
Emitter-Base Voltage	V_{EBO}	6.0	5.0	V
Continuous Collector Current	I_C	2.0		A
Continuous Base Current	I_B	1.0		A
Power Dissipation	P_D	10		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance	Θ_{JA}	175		°C/W
Thermal Resistance	Θ_{JC}	17.5		°C/W

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

		2N5320 2N5322		**2N5321 2N5323**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=80V	-	0.5	-	-	μA
I_{CBO}	V_{CB}=60V	-	-	-	5.0	μA
I_{EBO}	V_{EB}=5.0V	-	0.1	-	-	μA
I_{EBO}	V_{EB}=4.0V	-	-	-	0.5	μA
BV_{CEV}	I_C=100μA, V_{BE}=1.5V	100	-	75	-	V
BV_{CEO}	I_C=10mA	75	-	50	-	V
BV_{EBO}	I_E=100μA	6.0	-	5.0	-	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA (2N5320)	-	0.5	-	-	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA (2N5321)	-	-	-	0.8	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA (2N5322)	-	0.7	-	-	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA (2N5323)	-	-	-	1.2	V
$V_{BE(ON)}$	V_{CE}=4.0V, I_C=500mA	-	1.1	-	1.4	V
h_{FE}	V_{CE}=4.0V, I_C=500mA	30	150	40	250	
h_{FE}	V_{CE}=2.0V, I_C=1.0A	10	-	-	-	
f_T	V_{CE}=4.0V, I_C=50mA, f=10MHz	50	-	50	-	MHz

R4 (11-June 2012)

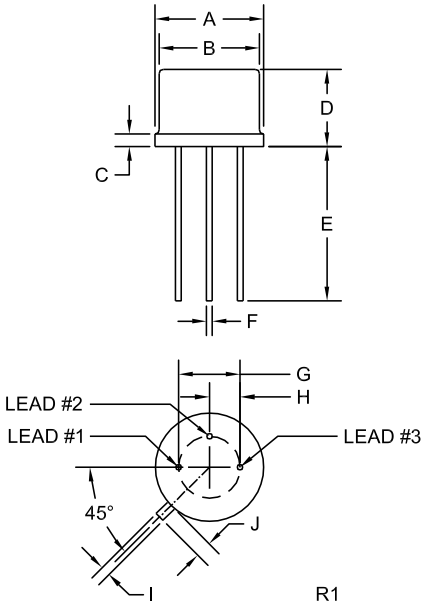
2N5320 2N5321 NPN
2N5322 2N5323 PNP

COMPLEMENTARY SILICON SWITCHING TRANSISTORS

ELECTRICAL CHARACTERISTICS - Continued: (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MAX	UNITS
t_{on}	V_{CC}=30V, I_C=500mA, I_{B1}=50mA (2N5320, 2N5321)	80	ns
t_{on}	V_{CC}=30V, I_C=500mA, I_{B1}=50mA (2N5322, 2N5323)	100	ns
t_{off}	V_{CC}=30V, I_C=500mA, I_{B1}=I_{B2}=50mA (2N5320, 2N5321)	800	ns
t_{off}	V_{CC}=30V, I_C=500mA, I_{B1}=I_{B2}=50mA (2N5322, 2N5323)	1.0	μs

TO-39 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

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

MARKING: FULL PART NUMBER