2N4231A 2N4232A 2N4233A NPN
2N6312 2N6313 2N6314 PNP

COMPLEMENTARY
SILICON POWER TRANSISTORS

TO-66 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4231A, 2N6312 series devices are complementary silicon power transistors, manufactured by the epitaxial base process, designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N4231A 2N6312**	**2N4232A 2N6313**	**2N4233A 2N6314**	**UNITS**
Collector-Base Voltage	V_{CBO}	40	60	80	V
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Continuous Collector Current	I_C		5.0		A
Peak Collector Current	I_{CM}		10		A
Continuous Base Current	I_B		2.0		A
Power Dissipation	P_D		75		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +200		°C
Thermal Resistance	Θ_{JC}		2.32		°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=Rated V_{CBO}		50	μA
I_{CEO}	V_{CE}=30V (2N4231A, 2N6312)		1.0	mA
I_{CEO}	V_{CE}=50V (2N4232A, 2N6313)		1.0	mA
I_{CEO}	V_{CE}=70V (2N4233A, 2N6314)		1.0	mA
I_{CEV}	V_{CE}=Rated V_{CEO}, V_{BE}=1.5V		0.1	mA
I_{CEV}	V_{CE}=Rated V_{CEO}, V_{BE}=1.5V, T_C=150°C		1.0	mA
I_{EBO}	V_{EB}=5.0V		0.5	mA
BV_{CEO}	I_C=100mA, (2N4231A, 2N6312)	40		V
BV_{CEO}	I_C=100mA, (2N4232A, 2N6313)	60		V
BV_{CEO}	I_C=100mA, (2N4233A, 2N6314)	80		V
$V_{CE(SAT)}$	I_C=1.5A, I_B=0.15A		0.7	V
$V_{CE(SAT)}$	I_C=3.0A, I_B=0.3A		2.0	V
$V_{CE(SAT)}$	I_C=5.0A, I_B=1.25A		4.0	V
$V_{BE(ON)}$	V_{CE}=2.0V, I_C=1.5A		1.4	V
h_{FE}	V_{CE}=2.0V, I_C=0.5A	40		
h_{FE}	V_{CE}=2.0V, I_C=1.5A	25	100	
h_{FE}	V_{CE}=2.0V, I_C=3.0A	10		
h_{FE}	V_{CE}=4.0V, I_C=5.0A	4.0		
h_{fe}	V_{CE}=10V, I_C=0.5A, f=1.0kHz	20		
f_T	V_{CE}=10V, I_C=0.5A, f=1.0MHz	4.0		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=100kHz		300	pF

R1 (2-September 2014)

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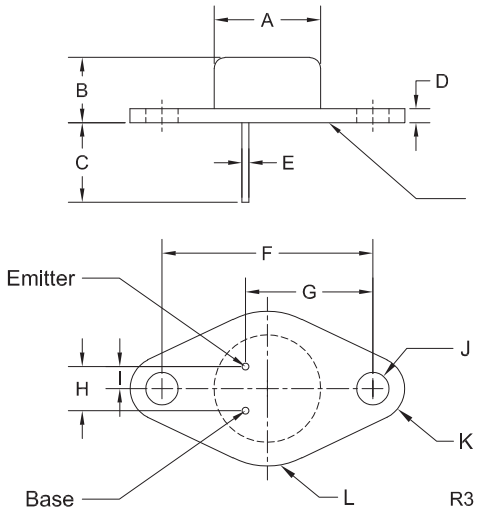
TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:
The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.956	0.964	24.28	24.48
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.141		3.58	
L (RAD)	0.345		8.76	

TO-66 (REV:R3)