

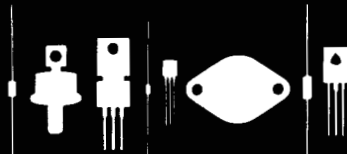
Central Semiconductor Corp.

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145 Adams Avenue  
Hauppauge, New York 11788



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

COMPLEMENTARY SILICON  
POWER TRANSISTORS

JEDEC TO-66 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4231A, 2N6312 series types are complementary silicon power transistors manufactured by the epitaxial base process mounted in a hermetically sealed metal case, designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS ( $T_C=25^\circ\text{C}$ )

	SYMBOL	2N4231A 2N6312	2N4232A 2N6313	2N4233A 2N6314	UNIT
Collector-Base Voltage	$V_{CB0}$	40	60	80	V
Collector-Emitter Voltage	$V_{CE0}$	40	60	80	V
Emitter-Base Voltage	$V_{EB0}$		5.0		V
Collector Current	$I_C$		5.0		A
Collector Current-PEAK	$I_{CM}$		10		A
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		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		2.32		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N4231A 2N6312		2N4232A 2N6313		2N4233A 2N6314		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CB0}$	$V_{CB}=\text{Rated } V_{CB0}$		0.05		0.05		0.05	mA
$I_{CE0}$	$V_{CE}=30\text{V}$		1.0		-		-	mA
$I_{CE0}$	$V_{CE}=50\text{V}$		-		1.0		-	mA
$I_{CE0}$	$V_{CE}=70\text{V}$		-		-		1.0	mA
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CE0}, V_{BE}(\text{OFF})=1.5\text{V}$		0.1		0.1		0.1	mA
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CE0}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=150^\circ\text{C}$		1.0		1.0		1.0	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		0.5		0.5		0.5	mA
$BV_{CE0}$	$I_C=100\text{mA}$	40		60		80		V
$V_{CE}(\text{SAT})$	$I_C=1.5\text{A}, I_B=0.15\text{A}$		0.7		0.7		0.7	V
$V_{CE}(\text{SAT})$	$I_C=3.0\text{A}, I_B=0.3\text{A}$		2.0		2.0		2.0	V
$V_{CE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=1.25\text{A}$		4.0		4.0		4.0	V
$V_{BE}(\text{ON})$	$V_{CE}=2.0\text{V}, I_C=1.5\text{A}$		1.4		1.4		1.4	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=0.5\text{A}$	40		40		40		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=1.5\text{A}$	25	100	25	100	25	100	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=3.0\text{A}$	10		10		10		
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=5.0\text{A}$	4.0		4.0		4.0		
$h_{fe}$	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=1.0\text{kHz}$	20		20		20		
$f_T$	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=1.0\text{MHz}$	4.0		4.0		4.0		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0\text{V}, f=0.1\text{MHz}$		300		300		300	pF