

2N6211  
2N6212  
2N6213

SILICON  
NPN POWER TRANSISTORS



TO-66 CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6211, 2N6212, and 2N6213 are silicon NPN transistors designed for high speed switching and high voltage amplifier applications.

**MARKING: FULL PART NUMBER**

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

Collector-Base Voltage  
Collector-Emitter Voltage  
Emitter-Base Voltage  
Continuous Collector Current  
Peak Collector Current  
Continuous Base Current  
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

SYMBOL	2N6211	2N6212	2N6213	UNITS
$V_{CBO}$	275	350	400	V
$V_{CEO}$	225	300	350	V
$V_{EBO}$		6.0		V
$I_C$		2.0		A
$I_{CM}$		5.0		A
$I_B$		1.0		A
$P_D$		35		W
$T_J, T_{stg}$		-65 to +200		$^\circ\text{C}$
$\theta_{JC}$		5.0		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N6211		2N6212		2N6213		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CEV}$	$V_{CE}=250\text{V}, V_{BE}=1.5\text{V}$	-	0.5	-	-	-	-	mA
$I_{CEV}$	$V_{CE}=315\text{V}, V_{BE}=1.5\text{V}$	-	-	-	0.5	-	-	mA
$I_{CEV}$	$V_{CE}=360\text{V}, V_{BE}=1.5\text{V}$	-	-	-	-	-	0.5	mA
$I_{CEV}$	$V_{CE}=250\text{V}, V_{BE}=1.5\text{V}, T_C=100^\circ\text{C}$	-	5.0	-	-	-	-	mA
$I_{CEV}$	$V_{CE}=315\text{V}, V_{BE}=1.5\text{V}, T_C=100^\circ\text{C}$	-	-	-	5.0	-	-	mA
$I_{CEV}$	$V_{CE}=360\text{V}, V_{BE}=1.5\text{V}, T_C=100^\circ\text{C}$	-	-	-	-	-	5.0	mA
$I_{CEO}$	$V_{CE}=150\text{V}$	-	5.0	-	5.0	-	5.0	mA
$I_{EBO}$	$V_{EB}=6.0\text{V}$	-	1.0	-	0.5	-	0.5	mA
$BV_{CEV}$	$I_C=50\text{mA}, V_{BE}=1.5\text{V}, L=10\text{mH}$	275	-	350	-	400	-	V
$BV_{CER}$	$I_C=50\text{mA}, R_{BE}=50\Omega$	250	-	325	-	375	-	V
$BV_{CEO}$	$I_C=50\text{mA}$	225	-	300	-	350	-	V
$BV_{EBO}$	$I_E=1.0\text{mA}$	6.0	-	-	-	-	-	V
$BV_{EBO}$	$I_E=0.5\text{mA}$	-	-	6.0	-	6.0	-	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=125\text{mA}$	-	1.4	-	1.6	-	2.0	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=125\text{mA}$	-	1.4	-	1.4	-	1.4	V
$h_{FE}$	$V_{CE}=2.8\text{V}, I_C=1.0\text{A}$	10	100	-	-	-	-	
$h_{FE}$	$V_{CE}=3.2\text{V}, I_C=1.0\text{A}$	-	-	10	100	-	-	
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}$	-	-	-	-	10	100	

R1 (18-June 2013)

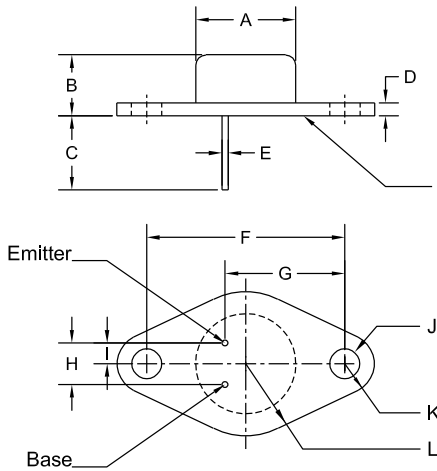
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**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$f_T$	$V_{CE}=10\text{V}$ , $I_C=200\text{mA}$ , $f=5.0\text{MHz}$	20		MHz
$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1.0\text{MHz}$		220	pF
$t_r$	$V_{CC}=200\text{V}$ , $I_C=1.0\text{A}$ , $I_{B1}=I_{B2}=125\text{mA}$		0.6	$\mu\text{s}$
$t_s$	$V_{CC}=200\text{V}$ , $I_C=1.0\text{A}$ , $I_{B1}=I_{B2}=100\text{mA}$		2.5	$\mu\text{s}$
$t_f$	$V_{CC}=200\text{V}$ , $I_C=1.0\text{A}$ , $I_{B1}=I_{B2}=125\text{mA}$		0.6	$\mu\text{s}$
$I_{s/b}$	$V_{CE}=40\text{V}$ , $t=1.0\text{s}$	875		mA

**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.

SYMBOL	INCHES		MILLIMETERS	
	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	0.958	0.962	24.33	24.43
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)	0.145		3.68	
L (RAD)	0.350		8.89	

TO-66 (REV:R2)

R2

**MARKING:**  
**FULL PART NUMBER**

R1 (18-June 2013)