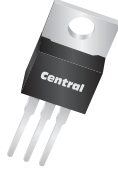


2N6486 2N6487 2N6488 NPN  
2N6489 2N6490 2N6491 PNP

**COMPLEMENTARY SILICON  
POWER TRANSISTORS**



**TO-220 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6486, 2N6489 series types are complementary silicon power transistors designed for general purpose switching and amplifier applications.

**MARKING: FULL PART NUMBER**

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

	SYMBOL	2N6486 2N6489	2N6487 2N6490	2N6488 2N6491	UNITS
Collector-Base Voltage	$V_{CBO}$	50	70	90	V
Collector-Emitter Voltage	$V_{CEO}$	40	60	80	V
Emitter-Base Voltage	$V_{EBO}$		5.0		V
Continuous Collector Current	$I_C$		15		A
Continuous Base Current	$I_B$		5.0		A
Power Dissipation	$P_D$		75		W
Power Dissipation ( $T_A=25^\circ\text{C}$ )	$P_D$		1.8		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		1.67		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N6486 2N6489		2N6487 2N6490		2N6488 2N6491		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CEV}$	$V_{CE}=45\text{V}, V_{EB}=1.5\text{V}$	-	500	-	-	-	-	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=65\text{V}, V_{EB}=1.5\text{V}$	-	-	-	500	-	-	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=85\text{V}, V_{EB}=1.5\text{V}$	-	-	-	-	-	500	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=\frac{1}{2}$ Rated $V_{CEO}$	-	1.0	-	1.0	-	1.0	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$	-	1.0	-	1.0	-	1.0	mA
$BV_{CEV}$	$V_{BE}=1.5\text{V}, I_C=200\text{mA}$	50	-	70	-	90	-	V
$BV_{CEO}$	$I_C=200\text{mA}$	40	-	60	-	80	-	V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=0.5\text{A}$	-	1.3	-	1.3	-	1.3	V
$V_{CE(SAT)}$	$I_C=15\text{A}, I_B=5.0\text{A}$	-	3.5	-	3.5	-	3.5	V
$V_{BE(ON)}$	$V_{CE}=4.0\text{V}, I_C=5.0\text{A}$	-	1.3	-	1.3	-	1.3	V
$V_{BE(ON)}$	$V_{CE}=4.0\text{V}, I_C=15\text{A}$	-	3.5	-	3.5	-	3.5	V
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=5.0\text{A}$	20	150	20	150	20	150	
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=15\text{A}$	5.0	-	5.0	-	5.0	-	
$h_{fe}$	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}, f=1.0\text{kHz}$	25	-	25	-	25	-	
$f_T$	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}, f=1.0\text{MHz}$	5.0	-	5.0	-	5.0	-	MHz

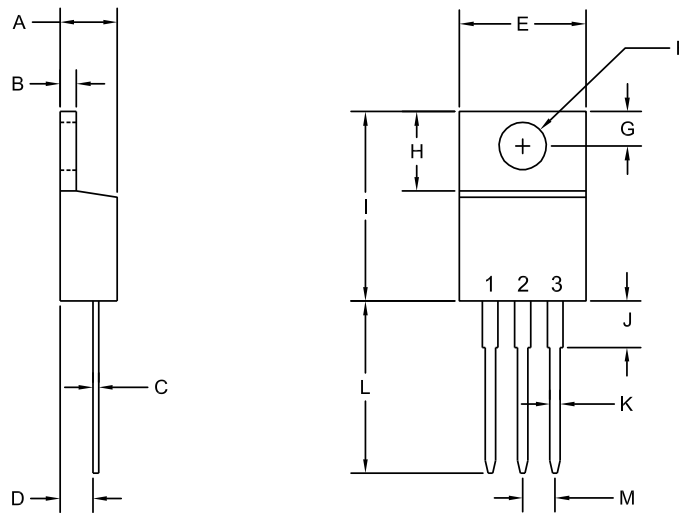
R1 (11-September 2012)

2N6486 2N6487 2N6488 NPN  
 2N6489 2N6490 2N6491 PNP



**COMPLEMENTARY SILICON  
 POWER TRANSISTORS**

**TO-220 CASE - MECHANICAL OUTLINE**



R2

**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- Tab) Collector

**MARKING:  
 FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

R1 (11-September 2012)



## OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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