

2N3766  
2N3767

**SILICON  
NPN POWER TRANSISTORS**



**TO-66 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N3766 and 2N3767 are silicon NPN power transistors manufactured by the epitaxial base process designed for power amplifier and medium speed switching applications.

**MARKING: FULL PART NUMBER**

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

Collector-Base Voltage	$V_{CBO}$	80	100	V
Collector-Emitter Voltage	$V_{CEO}$	60	80	V
Emitter-Base Voltage	$V_{EBO}$	6.0		V
Continuous Collector Current	$I_C$	4.0		A
Continuous Base Current	$I_B$	2.0		A
Power Dissipation	$P_D$	25		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +200		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$	7.0		$^\circ\text{C/W}$

SYMBOL	2N3766	2N3767	UNITS
$V_{CBO}$	80	100	V
$V_{CEO}$	60	80	V
$V_{EBO}$	6.0		V
$I_C$	4.0		A
$I_B$	2.0		A
$P_D$	25		W
$T_J, T_{stg}$	-65 to +200		$^\circ\text{C}$
$\theta_{JC}$	7.0		$^\circ\text{C/W}$

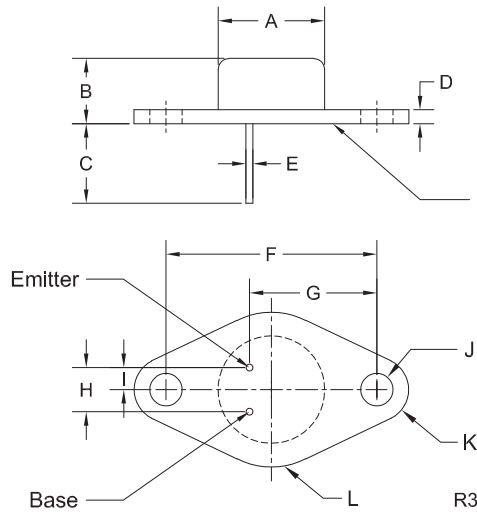
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=\text{Rated } V_{CBO}$		10	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CEO}, V_{EB}=1.5\text{V}$		10	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=\text{Rated } V_{CEO}$		500	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=6.0\text{V}$		500	$\mu\text{A}$
$BV_{CEO}$	$I_C=100\text{mA}$ (2N3766)	60		V
$BV_{CEO}$	$I_C=100\text{mA}$ (2N3767)	80		V
$V_{CE(\text{SAT})}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.0	V
$V_{CE(\text{SAT})}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		2.5	V
$V_{BE(\text{ON})}$	$V_{CE}10\text{V}, I_C=1.0\text{A}$		1.5	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	30		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	40	160	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	20		
$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=10\text{MHz}$	10		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		50	pF

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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**

<b>DIMENSIONS</b>				
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	0.956	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)

R2 (2-September 2014)

## 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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### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

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