

2N3766
2N3767

SILICON
NPN POWER TRANSISTORS



TO-66 CASE



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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	θ_{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		$^\circ\text{C}$
θ_{JC}	7.0		$^\circ\text{C/W}$

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

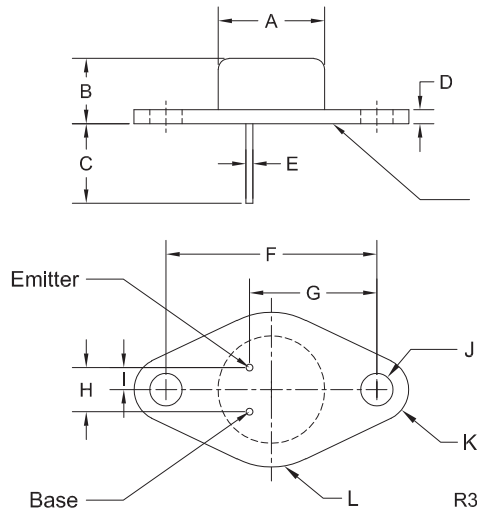
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		10	μA
I_{CEV}	$V_{CE}=\text{Rated } V_{CEO}, V_{EB}=1.5\text{V}$		10	μA
I_{CEO}	$V_{CE}=\text{Rated } V_{CEO}$		500	μA
I_{EBO}	$V_{EB}=6.0\text{V}$		500	μA
BV_{CEO}	$I_C=100\text{mA}$ (2N3766)	60		V
BV_{CEO}	$I_C=100\text{mA}$ (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**

DIMENSIONS				
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



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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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