

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors  
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2N3762  
2N3763

PNP SILICON TRANSISTOR

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3762 and 2N3763 types are Silicon PNP Epitaxial Planar Transistors designed for core driver applications.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	SYMBOL	2N3762	2N3763	UNITS
Collector-Base Voltage	V <sub>CBO</sub>	40	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	50	V
Emitter-Base Voltage	V <sub>EBO</sub>		5.0	V
Collector Current	I <sub>C</sub>		1.5	A
Power Dissipation	P <sub>D</sub>		1.0	W
Power Dissipation (T <sub>C</sub> =25°C)	P <sub>D</sub>		4.0	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200		°C
Thermal Resistance	θ <sub>JA</sub>		175	°C/W
Thermal Resistance	θ <sub>JC</sub>		44	°C/W

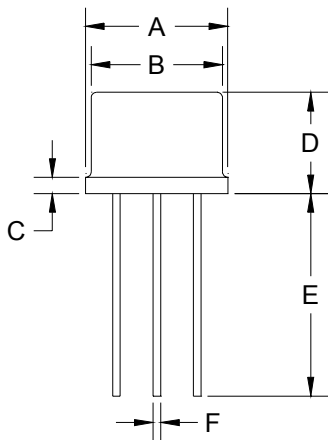
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N3762		2N3763		UNITS
		MIN	MAX	MIN	MAX	
I <sub>BL</sub>	V <sub>CE</sub> =½Rated V <sub>CBO</sub> , V <sub>EB</sub> =2.0V		200		200	nA
I <sub>CEV</sub>	V <sub>CE</sub> =½Rated V <sub>CBO</sub> , V <sub>EB</sub> =2.0V		100		100	nA
I <sub>CEV</sub>	V <sub>CB</sub> =½Rated V <sub>CBO</sub> , V <sub>EB</sub> =2.0V. T <sub>A</sub> =100°C		10		10	μA
BV <sub>CBO</sub>	I <sub>C</sub> =10μA	40		60		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	40		50		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	5.0		5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		0.10		0.10	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.22		0.22	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.50		0.50	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA		0.90		0.90	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA		0.80		0.80	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		1.00		1.00	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		1.20		1.20	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA	0.90	1.40	0.90	1.40	V

ELECTRICAL CHARACTERISTICS (Continued)

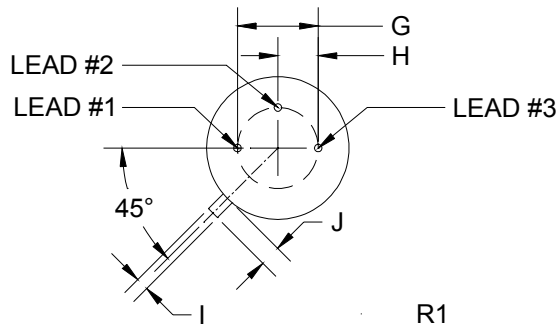
SYMBOL	TEST CONDITIONS	2N3762		2N3763		UNITS
		MIN	MAX	MIN	MAX	
$h_{FE}$	$V_{CE}=1.0V, I_C=10mA$	35		35		
$h_{FE}$	$V_{CE}=1.0V, I_C=150mA$	40		40		
$h_{FE}$	$V_{CE}=1.0V, I_C=500mA$	35		35		
$h_{FE}$	$V_{CE}=1.5V, I_C=1.0A$	20	80	30	120	
$h_{FE}$	$V_{CE}=5.0V, I_C=1.5A$	20		30		
$ h_{fe} $	$V_{CE}=10V, I_C=50mA, f=100MHz$	1.8		1.5		
$C_{ob}$	$V_{CB}=10V, I_E=0, f=100kHz$		15		15	pF
$C_{ib}$	$V_{BE}=0.5V, I_C=0, f=100kHz$		80		80	pF
$t_d$	$V_{CC}=30V, V_{BE(off)}=2.0V, I_C=1.0A, I_{B1}=100mA$		8.0		8.0	ns
$t_r$	$V_{CC}=30V, V_{BE(off)}=2.0V, I_C=1.0A, I_{B1}=100mA$		3.5		3.5	ns
$t_s$	$V_{CC}=30V, I_C=1.0A, I_{B1}=-I_{B2}=100mA$		80		80	ns
$t_f$	$V_{CC}=30V, I_C=1.0A, I_{B1}=-I_{B2}=100mA$		35		35	ns
$Q_{\tau}$	$V_{CC}=30V, I_C=1.0A, I_B=100mA$		30		30	pC

JEDEC TO-39 PACKAGE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)



LEAD CODE:

1. Emitter
2. Base
3. Collector

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

Datasheets for electronics components.