

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors
www.centalsemi.com

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_A=25°C)

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

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N3762		2N3763		UNITS
		MIN	MAX	MIN	MAX	
I _{BL}	V _{CE} =½Rated V _{CBO} , V _{EB} =2.0V		200		200	nA
I _{CEV}	V _{CE} =½Rated V _{CBO} , V _{EB} =2.0V		100		100	nA
I _{CEV}	V _{CB} =½Rated V _{CBO} , V _{EB} =2.0V, T _A =100°C		10		10	μA
BV _{CBO}	I _C =10μA	40		60		V
BV _{CEO}	I _C =10mA	40		50		V
BV _{EBO}	I _E =10μA	5.0		5.0		V
V _{CE(SAT)}	I _C =10mA, I _B =1.0mA		0.10		0.10	V
V _{CE(SAT)}	I _C =150mA, I _B =15mA		0.22		0.22	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA		0.50		0.50	V
V _{CE(SAT)}	I _C =1.0A, I _B =100mA		0.90		0.90	V
V _{BE(SAT)}	I _C =10mA, I _B =1.0mA		0.80		0.80	V
V _{BE(SAT)}	I _C =150mA, I _B =15mA		1.00		1.00	V
V _{BE(SAT)}	I _C =500mA, I _B =50mA		1.20		1.20	V
V _{BE(SAT)}	I _C =1.0A, I _B =100mA	0.90	1.40	0.90	1.40	V

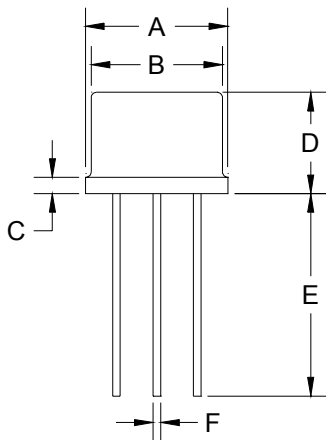
(CONTINUED ON REVERSE SIDE)

R1

ELECTRICAL CHARACTERISTICS (Continued)

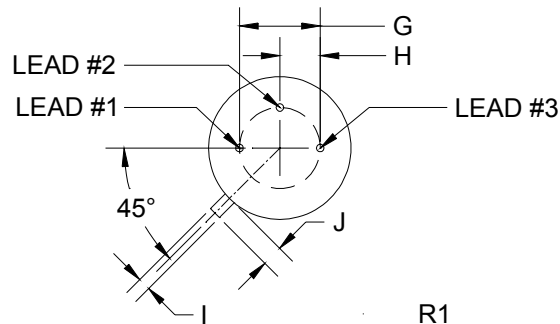
SYMBOL	TEST CONDITIONS	2N3762		2N3763		UNITS
		MIN	MAX	MIN	MAX	
h_{FE}	$V_{CE}=1.0V, I_C=10mA$	35		35		
h_{FE}	$V_{CE}=1.0V, I_C=150mA$	40		40		
h_{FE}	$V_{CE}=1.0V, I_C=500mA$	35		35		
h_{FE}	$V_{CE}=1.5V, I_C=1.0A$	20	80	30	120	
h_{FE}	$V_{CE}=5.0V, I_C=1.5A$	20		30		
$ h_{fe} $	$V_{CE}=10V, I_C=50mA, f=100MHz$	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_τ	$V_{CC}=30V, I_C=1.0A, I_B=100mA$		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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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).

CONTACT US

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