

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

www.centrasemi.com

2N5679 2N5680 PNP
2N5681 2N5682 NPN

COMPLEMENTARY SILICON
HIGH POWER TRANSISTORS

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5679 Series types are complementary silicon high power transistors manufactured by the epitaxial planar process and designed for general-purpose amplifier and switching applications where high voltages are required.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	2N5679 2N5681	2N5680 2N5682	UNITS
Collector-Base Voltage	V _{CB0}	100	120	V
Collector-Emitter Voltage	V _{CEO}	100	120	V
Emitter-Base Voltage	V _{EBO}		4.0	V
Collector Current	I _C		1.0	A
Base Current	I _B		0.5	A
Power Dissipation	P _D		1.0	W
Power Dissipation(T _C =25°C)	P _D		10	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}		17.5	°C/W

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

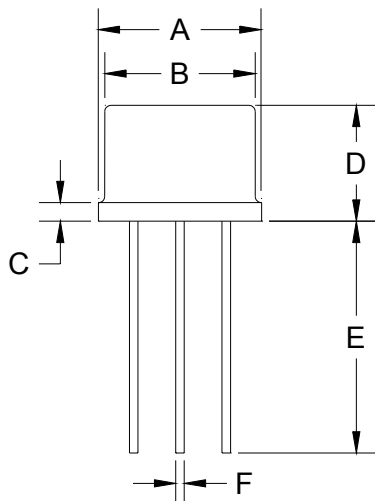
SYMBOL	TEST CONDITIONS	2N5679 2N5681		2N5680 2N5682		UNITS
		MIN	MAX	MIN	MAX	
I _{CB0}	V _{CB} = Rated V _{CB0}		1.0		1.0	μA
I _{CEV}	V _{CE} = Rated V _{CEO} , V _{EB} =1.5V		1.0		1.0	μA
I _{CEV}	V _{CE} = Rated V _{CEO} , V _{EB} =1.5V, T _C =150°C		1.0		1.0	mA
I _{CEO}	V _{CE} =70V		10	---		μA
I _{CEO}	V _{CE} =80V		---		10	μA
I _{EBO}	V _{EB} =4.0V		1.0		1.0	μA
BV _{CEO}	I _C =10mA	100		120		V
V _{CE(SAT)}	I _C =250mA, I _B =25mA		0.6		0.6	V
V _{CE(SAT)}	I _C =500mA, I _B =50mA		1.0		1.0	V
V _{CE(SAT)}	I _C =1.0A, I _B =200mA		2.0		2.0	V
V _{BE(ON)}	V _{CE} =2.0V, I _C =250mA		1.0		1.0	V
h _{FE}	V _{CE} =2.0V, I _C =250mA	40	150	40	150	
h _{FE}	V _{CE} =2.0V, I _C =1.0A	5.0		5.0		

(SEE REVERSE SIDE)

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

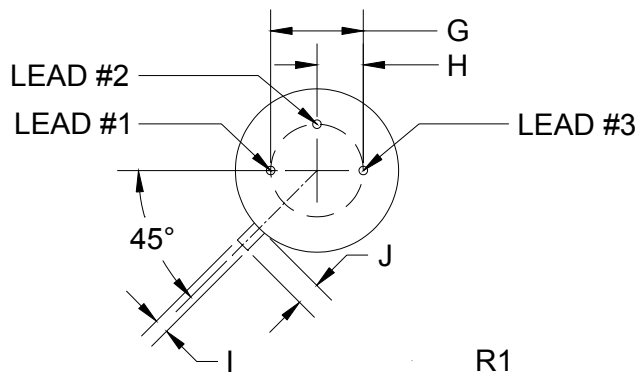
SYMBOL	TEST CONDITIONS	2N5679 2N5681		2N5680 2N5682		UNITS
		MIN	MAX	MIN	MAX	
h_{fe}	$V_{CE}=1.5\text{V}, I_C=0.2\text{A}, f=1.0\text{kHz}$	40		40		
f_T	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=10\text{MHz}$	30		30		MHz
C_{ob}	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		50		50	pF

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)



R1

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