2N5679 2N5680 PNP
2N5681 2N5682 NPN

COMPLEMENTARY
SILICON POWER TRANSISTORS

TO-39 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5679, 2N5681 series devices are complementary silicon power transistors, manufactured by the epitaxial planar process, designed for general purpose amplifier and switching applications where high voltages are required.

MARKING: FULL PART NUMBER

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

	SYMBOL	2N5679 2N5681	2N5680 2N5682	UNITS
Collector-Base Voltage	V_{CBO}	100	120	V
Collector-Emitter Voltage	V_{CEO}	100	120	V
Emitter-Base Voltage	V_{EBO}	4.0		V
Continuous Collector Current	I_C	1.0		A
Continuous 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	MIN	MAX	UNITS
I_{CBO}	V_{CB}=Rated V_{CBO}		1.0	μA
I_{CEV}	V_{CE}=Rated V_{CEO}, V_{EB}=1.5V		1.0	μA
I_{CEV}	V_{CE}=Rated V_{CEO}, V_{EB}=1.5V, T_C=150°C		1.0	mA
I_{CEO}	V_{CE}=70V (2N5679, 2N5681)		10	μA
I_{CEO}	V_{CE}=80V (2N5680, 2N5682)		10	μA
I_{EBO}	V_{EB}=4.0V		1.0	μA
BV_{CEO}	I_C=10mA (2N5679, 2N5681)	100		V
BV_{CEO}	I_C=10mA (2N5680, 2N5682)	120		V
$V_{CE(SAT)}$	I_C=250mA, I_B=25mA		0.6	V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		1.0	V
$V_{CE(SAT)}$	I_C=1.0A, I_B=200mA		2.0	V
$V_{BE(ON)}$	V_{CE}=2.0V I_C=250mA		1.0	V
h_{FE}	V_{CE}=2.0V, I_C=250mA	40	150	
h_{FE}	V_{CE}=2.0V, I_C=1.0A	5.0		
h_{fe}	V_{CE}=1.5V, I_C=0.2A, f=1.0kHz	40		
f_T	V_{CE}=10V, I_C=100mA, f=10MHz	30		MHz
C_{ob}	V_{CB}=20V, I_E=0, f=1.0MHz		50	pF

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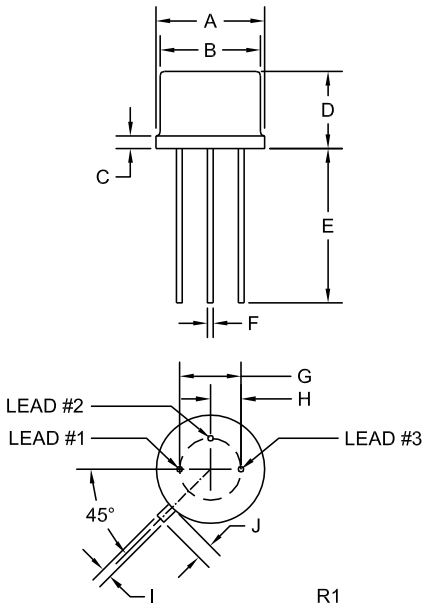
TO-39 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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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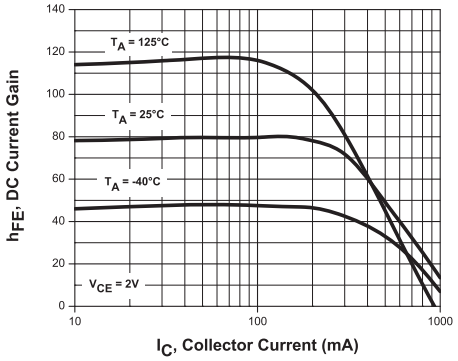
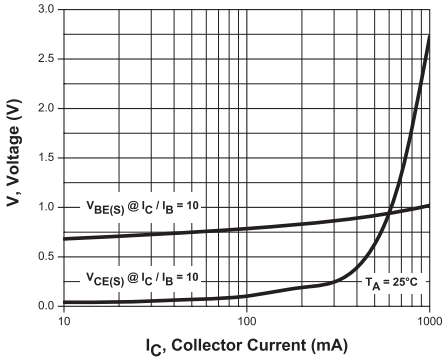
PNP TYPICAL ELECTRICAL CHARACTERISTICS

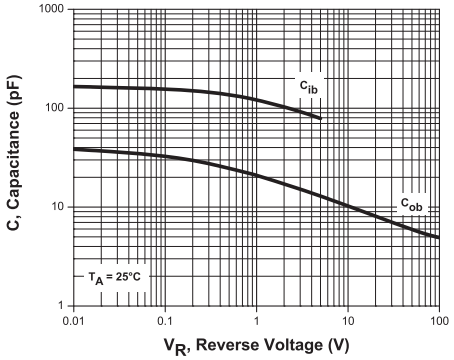
DC Current Gain



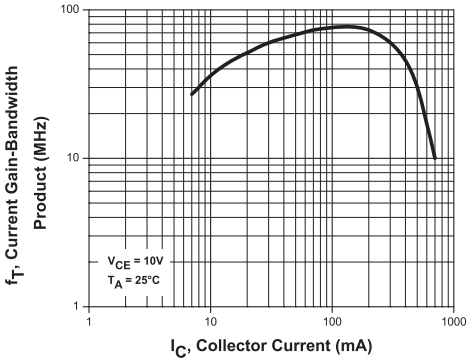
"ON" Voltage



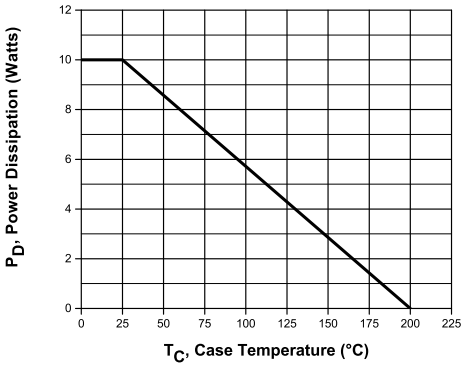
Capacitance



Current Gain-Bandwidth Product



Power Derating



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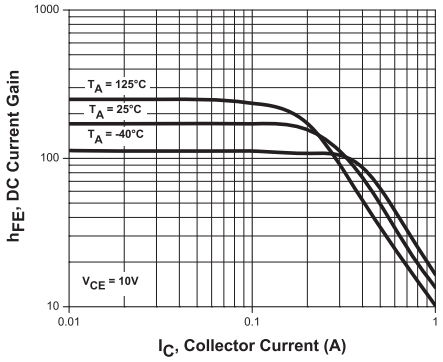
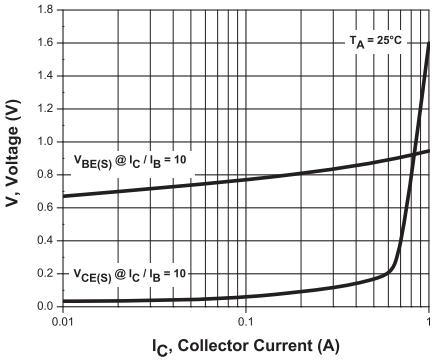
NPN TYPICAL ELECTRICAL CHARACTERISTICS

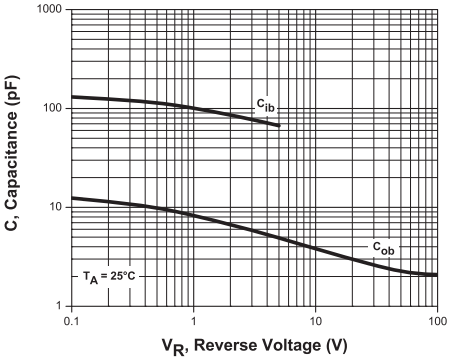
DC Current Gain



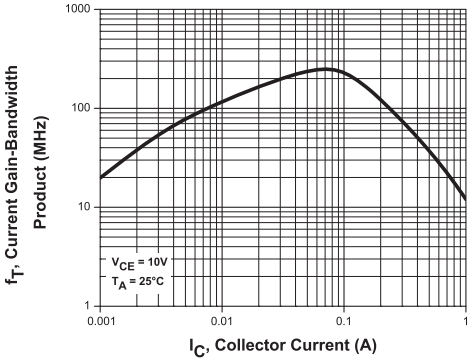
"ON" Voltage



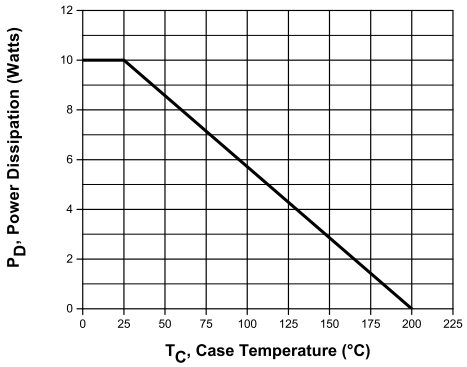
Capacitance



Current Gain-Bandwidth Product



Power Derating



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