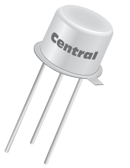
2N5679 2N5680 PNP
2N5681 2N5682 NPN

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

R2 (2-December 2013)

2N5679 2N5680 PNP
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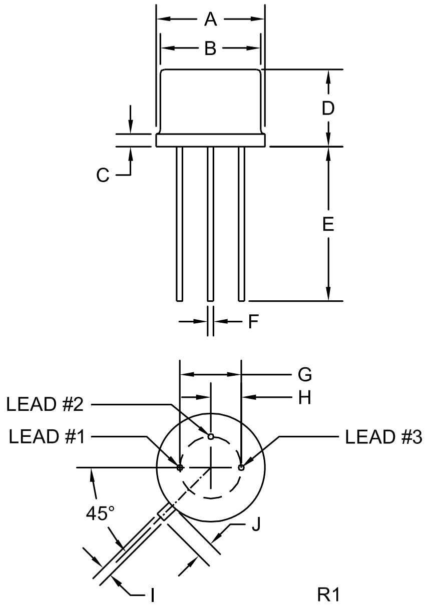
COMPLEMENTARY
SILICON POWER TRANSISTORS

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

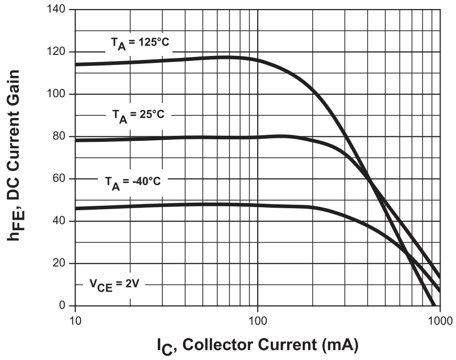
MARKING: FULL PART NUMBER

2N5679 2N5680 PNP
2N5681 2N5682 NPN

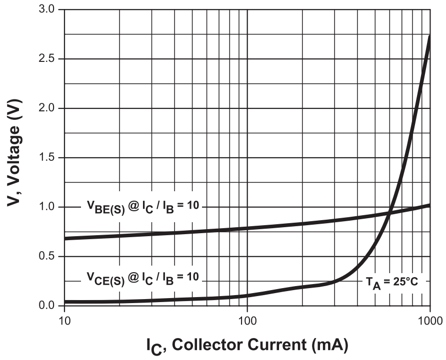
COMPLEMENTARY
SILICON POWER TRANSISTORS

PNP TYPICAL ELECTRICAL CHARACTERISTICS

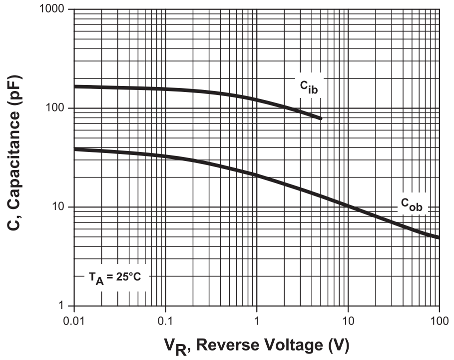
DC Current Gain



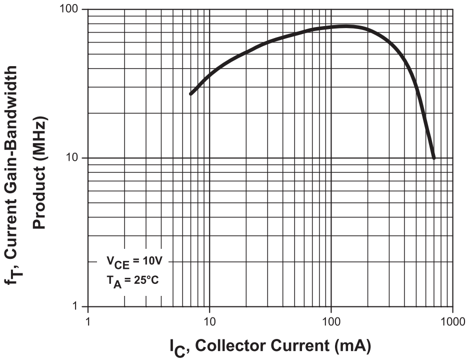
"ON" Voltage



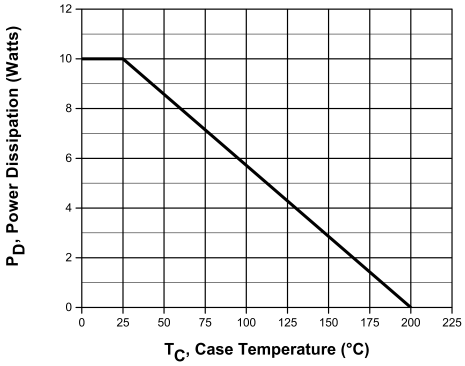
Capacitance



Current Gain-Bandwidth Product



Power Derating



2N5679 2N5680 PNP
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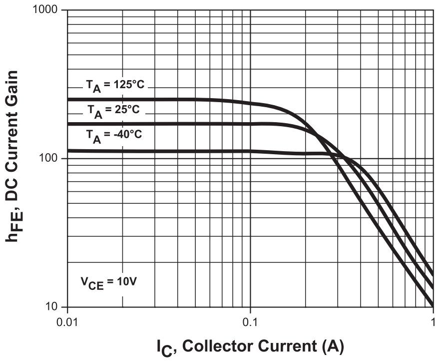
COMPLEMENTARY
SILICON POWER TRANSISTORS

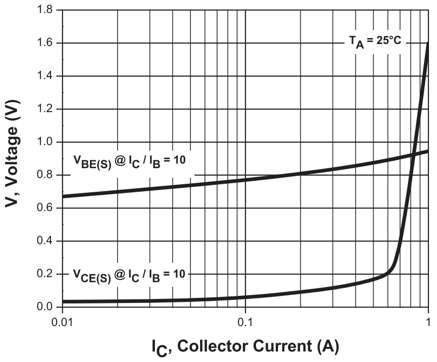
Central Semiconductor Corp.

NPN TYPICAL ELECTRICAL CHARACTERISTICS

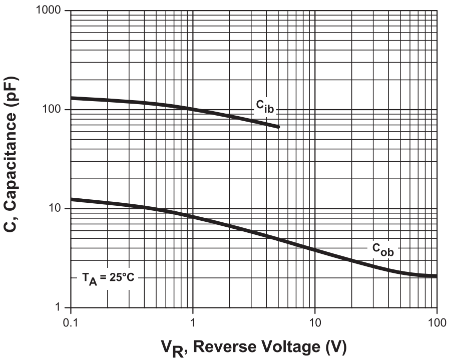
DC Current Gain



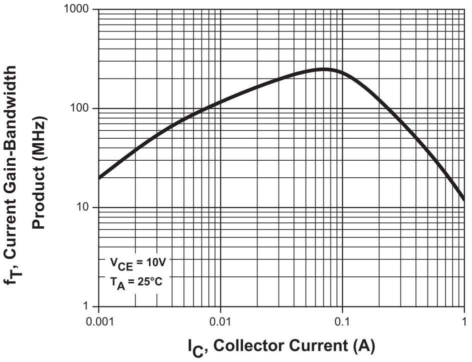
"ON" Voltage



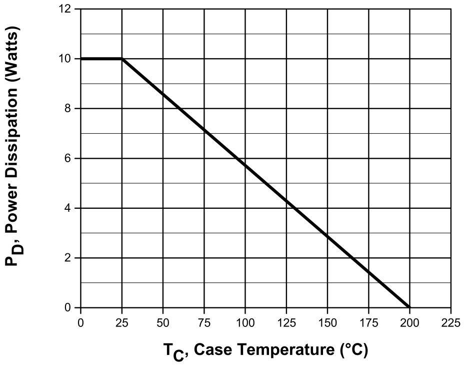
Capacitance



Current Gain-Bandwidth Product



Power Derating



R2 (2-December 2013)

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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