

CMPTH81

**SURFACE MOUNT
PNP SILICON
RF TRANSISTOR**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPTH81 type is a PNP Silicon RF Transistor, epoxy molded in a surface mount package, designed for general RF amplifier applications.

MARKING CODE: C3D or 3D

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation (Note 1)
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{CB0} 20
 V_{CEO} 20
 V_{EBO} 3.0
 I_C 50
 P_D 225
 T_J, T_{stg} -55 to +150
 θ_{JA} 556

UNITS

V
V
V
mA
mW
 $^\circ\text{C}$
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=10\text{V}$		100	nA
I_{EBO}	$V_{EB}=2.0\text{V}$		100	nA
BV_{CBO}	$I_C=10\mu\text{A}$	20		V
BV_{CEO}	$I_C=1.0\text{mA}$	20		V
BV_{EBO}	$I_E=10\mu\text{A}$	3.0		V
$V_{CE(SAT)}$	$I_C=5.0\text{mA}, I_B=500\mu\text{A}$		0.5	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=5.0\text{mA}$		0.9	V
h_{FE}	$V_{CE}=10\text{V}, I_C=5.0\text{mA}$	60		
f_T	$V_{CE}=10\text{V}, I_C=5.0\text{mA}, f=100\text{MHz}$	600		MHz
C_{cb}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		0.85	pF
C_{ce}	$V_{CB}=10\text{V}, I_B=0, f=1.0\text{MHz}$		0.65	pF

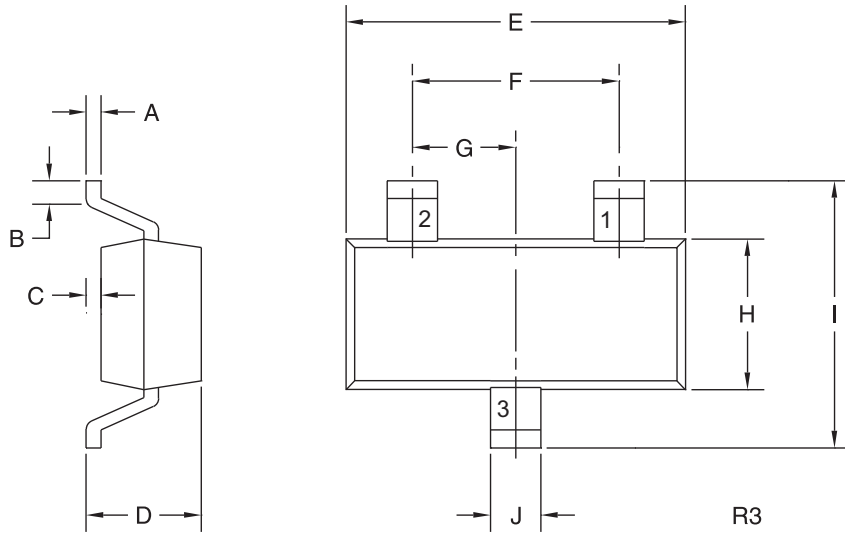
Notes: (1) FR-4 Epoxy PCB Substrate 1.6" x 1.6" x 0.06"

R5 (15-August 2012)

CMPH81
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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

MARKING CODE: C3D or 3D

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R5 (15-August 2012)

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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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms

Product End of Life Notification

PDN ID:	PDN01102
Notification Date:	8/09/18
Last Buy Date:	2/09/19
Last Shipment Date	8/09/19

Summary: The CP681 RF transistor wafer process is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CMPH81 BK	N/A, Stock Only
CMPH81 TR	N/A, Stock Only
CP681-MPSH81-CM	N/A, Stock Only
CP681-MPSH81-CT	N/A, Stock Only
CP681-MPSH81-CT20	N/A, Stock Only
MPSH81	N/A, Stock Only
MPSH81 TRE	N/A, Stock Only

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.