## CMPTH10

## SURFACE MOUNT NPN SILICON RF TRANSISTOR



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# **DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTH10 type is an NPN silicon RF transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for low noise UHF/VHF amplifier and high output oscillator applications.

**MARKING CODE: C3E** 



MAXIMUM RATINGS: (T <sub>A</sub> =25°C)	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Power Dissipation	$P_{D}$	350	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	Θ.ΙΔ	357	°C/W

# **ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C unless otherwise noted)

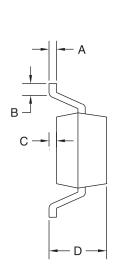
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =25V		100	nA
I <sub>EBO</sub>	V <sub>EB</sub> =2.0V		100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	30		V
BVCEO	I <sub>C</sub> =1.0mA	25		V
BVEBO	I <sub>E</sub> =10μA	3.0		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =4.0mA, I <sub>B</sub> =0.4mA		0.50	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =10V, I <sub>B</sub> =4.0mA		0.95	V
hFE	$V_{CE}$ =10V, $I_{C}$ =4.0mA	60		
f <sub>T</sub>	$V_{CE}$ =10V, $I_{C}$ =4.0mA, f=100MHz	650		MHz
C <sub>cb</sub>	$V_{CB}$ =10V, $I_E$ =0, f=1.0MHz		0.70	pF
C <sub>rb</sub>	$V_{CB}$ =10V, $I_E$ =0, f=1.0MHz		0.65	pF
rb'C <sub>C</sub>	$V_{CB}$ =10V, $I_{C}$ =4.0mA, f=31.8MHz		9.0	ps

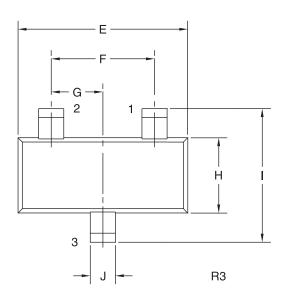
# CMPTH10

# SURFACE MOUNT **NPN SILICON RF TRANSISTOR**



# **SOT-23 CASE - MECHANICAL OUTLINE**





# LEAD CODE:

- 1) Base 2) Emitter 3) Collector

MARKING CODE: C3E

DIM	ENIOLONI	_			
	DIMENSIONS				
INCHES		MILLIMETERS			
MIN	MAX	MIN	MAX		
0.003	0.007	0.08	0.18		
0.006	-	0.15	-		
-	0.005	-	0.13		
0.035	0.043	0.89	1.09		
0.110	0.120	2.80	3.05		
0.075		1.90			
0.037		0.95			
0.047	0.055	1.19	1.40		
0.083	0.098	2.10	2.49		
0.014	0.020	0.35	0.50		
	MIN 0.003 0.006 - 0.035 0.110 0.0 0.047 0.083	MIN MAX 0.003 0.007 0.006 0.005 0.035 0.043 0.110 0.120 0.075 0.037 0.047 0.055 0.083 0.098	MIN MAX MIN 0.003 0.007 0.08 0.006 - 0.15 - 0.005 - 0.035 0.043 0.89 0.110 0.120 2.80 0.075 1. 0.037 0. 0.047 0.055 1.19 0.083 0.098 2.10		

SOT-23 (REV: R3)

R5 (3-February 2010)

## **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 guick ship samples (2<sup>nd</sup> 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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# Product End of Life Notification

PDN ID:	PDN01112
Notification Date:	1/18/19
Last Buy Date:	7/18/19
Last Shipment Date	1/18/20

Summary: The CP302 RF Transistor wafer process is discontinued and is 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.

Central Part Number	Replacement
CEN1107	N/A, Stock Only
CEN1107 APM	N/A, Stock Only
CMPTH10 BK	N/A, Stock Only
CMPTH10 TR	N/A, Stock Only
CP302-MPSH10-CT	N/A, Stock Only
CP302-MPSH10-CT20	N/A, Stock Only
CP302-MPSH10-WN	N/A, Stock Only
MPSH10	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.

CCC785 REV 002