

CMPF5484
CMPF5485
CMPF5486

SURFACE MOUNT
N-CHANNEL
SILICON JFET



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPF5484 Series types are surface mount, N-Channel JFETs designed for RF amplifier and mixer applications. These devices will operate well in the VHF/UHF frequency range.

MARKING CODES:

CMPF5484: 6B

CMPF5485: 6B1

CMPF5486: 6H

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

Gate-Drain Voltage
Gate-Source Voltage
Drain Current
Gate Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{GD} 25
 V_{GS} 25
 I_D 30
 I_G 10
 P_D 350
 T_J, T_{stg} -65 to +150
 θ_{JA} 357

UNITS

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

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

SYMBOL	TEST CONDITIONS	CMPF5484		CMPF5485		CMPF5486		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{GSS}	$V_{GS}=20\text{V}$	-	1.0	-	1.0	-	1.0	nA
I_{GSS}	$V_{GS}=20\text{V}, T_A=100^{\circ}\text{C}$	-	0.2	-	0.2	-	0.2	μA
I_{DSS}	$V_{DS}=15\text{V}$	1.0	5.0	4.0	10	8.0	20	mA
BV_{GSS}	$I_G=1.0\mu\text{A}$	25	-	25	-	25	-	V
$V_{GS(off)}$	$V_{DS}=15\text{V}, I_D=10\text{nA}$	0.3	3.0	0.5	4.0	2.0	6.0	V
g_{FS}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{KHz}$	3.0	6.0	3.5	7.0	4.0	8.0	mS
Y_{os}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{KHz}$	-	50	-	60	-	75	μS
C_{iss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	5.0	-	5.0	-	5.0	pF
C_{oss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	2.0	-	2.0	-	2.0	pF
C_{rss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	1.0	-	1.0	-	1.0	pF
$R_{e(yis)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$	-	100	-	-	-	-	μS
$R_{e(yis)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$	-	-	-	1.0	-	1.0	mS
$R_{e(yos)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$	-	75	-	-	-	-	μS
$R_{e(yos)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$	-	-	-	100	-	100	μS
$R_{e(yis)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$	2.5	-	-	-	-	-	mS
$R_{e(yis)}$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$	-	-	3.0	-	3.5	-	mS

R5 (27-January 2010)

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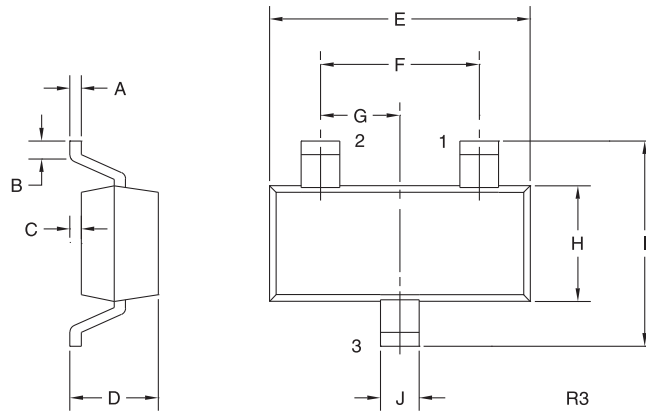
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ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	CMPF5484		CMPF5485		CMPF5486		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
NF	$V_{DS}=15\text{V}$, $V_{GS}=0$, $R_G=1\text{M}\Omega$, $f=1.0\text{KHz}$	-	2.5	-	2.5	-	2.5	dB
NF	$V_{DS}=15\text{V}$, $I_D=1.0\text{mA}$, $R_G=1\text{K}\Omega$, $f=100\text{MHz}$	-	3.0	-	-	-	-	dB
NF	$V_{DS}=15\text{V}$, $I_D=1.0\text{mA}$, $R_G=1\text{K}\Omega$, $f=200\text{MHz}$	-	4.0TYP	-	-	-	-	dB
NF	$V_{DS}=15\text{V}$, $I_D=4.0\text{mA}$, $R_G=1\text{K}\Omega$, $f=100\text{MHz}$	-	-	-	2.0	-	2.0	dB
NF	$V_{DS}=15\text{V}$, $I_D=4.0\text{mA}$, $R_G=1\text{K}\Omega$, $f=400\text{MHz}$	-	-	-	4.0	-	4.0	dB
GPS	$V_{DS}=15\text{V}$, $I_D=1.0\text{mA}$, $f=100\text{MHz}$	16	25	-	-	-	-	dB
GPS	$V_{DS}=15\text{V}$, $I_D=1.0\text{mA}$, $f=200\text{MHz}$	-	14 TYP	-	-	-	-	dB
GPS	$V_{DS}=15\text{V}$, $I_D=4.0\text{mA}$, $f=100\text{MHz}$	-	-	18	30	18	30	dB
GPS	$V_{DS}=15\text{V}$, $I_D=4.0\text{mA}$, $f=400\text{MHz}$	-	-	10	20	10	20	dB

SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Drain
- 2) Source
- 3) Gate

MARKING CODES:

CMPF5484: 6B
CMPF5485: 6B1
CMPF5486: 6H

SYMBOL	DIMENSIONS			
	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 (27-January 2010)