

CMPF4391
CMPF4392
CMPF4393

N-CHANNEL JFET



SOT-23 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPF4391 series types are N-Channel Silicon Field Effect Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for switching applications.

Marking Codes are 6J, 6K, and 6G Respectively.

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

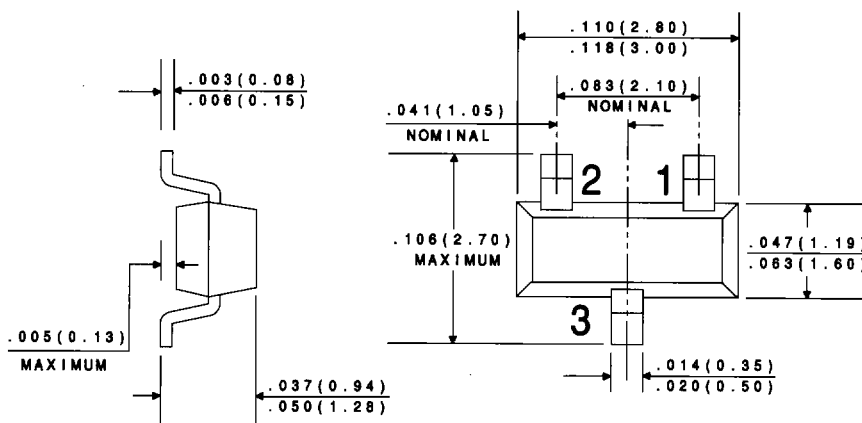
	SYMBOL		UNITS
Drain-Gate Voltage	V_{GD}	40	V
Gate-Source Voltage	V_{GS}	40	V
Drain-Source Voltage	V_{DS}	40	V
Gate Current	I_G	50	mA
Power Dissipation	P_D	350	mW
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	θ_{JA}	357	$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	CMPF4391		CMPF4392		CMPF4393		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{GSS}	$V_{GS}=20\text{V}$		0.1		0.1		0.1	nA
I_{GSS}	$V_{GS}=20\text{V}, T_A=100^{\circ}\text{C}$		0.2		0.2		0.2	μA
I_{DSS}	$V_{DS}=20\text{V}$	50	150	25	75	5.0	30	mA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=12\text{V}$		0.1		-		-	nA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=7.0\text{V}$		-		0.1		-	nA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=5.0\text{V}$		-		-		0.1	nA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=12\text{V}, T_A=100^{\circ}\text{C}$		0.2		-		-	μA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=7.0\text{V}, T_A=100^{\circ}\text{C}$		-		0.2		-	μA
$I_{D(OFF)}$	$V_{DS}=20\text{V}, V_{GS}=5.0\text{V}, T_A=100^{\circ}\text{C}$		-		-		0.2	μA
BV_{GSS}	$I_G=1.0\mu\text{A}$	40		40		40		V
$V_{GS(OFF)}$	$V_{DS}=20\text{V}, I_D=1.0\text{nA}$	4.0	10	2.0	5.0	0.5	3.0	V
$V_{GS(f)}$	$I_G=1.0\text{mA}$		1.0		1.0		1.0	V
$V_{DS(ON)}$	$I_D=12\text{mA}$		0.4		-		-	V
$V_{DS(ON)}$	$I_D=6.0\text{mA}$		-		0.4		-	V
$V_{DS(ON)}$	$I_D=3.0\text{mA}$		-		-		0.4	V

SYMBOL	TEST CONDITIONS	CMPF4391		CMPF4392		CMPF4393		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
$r_{DS(ON)}$	$I_D=1.0mA, V_{GS}=0$		30		60		100	Ω
$r_{ds(ON)}$	$V_{GS}=0, I_D=0, f=1.0kHz$		30		60		100	Ω
C_{iss}	$V_{DS}=20V, V_{GS}=0, f=1.0MHz$		14		14		14	pF
C_{rss}	$V_{GS}=12V, V_{DS}=0, f=1.0MHz$		3.5		-		-	pF
C_{rss}	$V_{GS}=7.0V, V_{DS}=0, f=1.0MHz$		-		3.5		-	pF
C_{rss}	$V_{GS}=5.0V, V_{DS}=0, f=1.0MHz$		-		-		3.5	pF
t_{ON}	$I_D(ON)=12mA$		15		-		-	ns
t_{ON}	$I_D(ON)=6.0mA$		-		15		-	ns
t_{ON}	$I_D(ON)=3.0mA$		-		-		15	ns
t_{OFF}	$V_{GS(OFF)}=12V$		20		-		-	ns
t_{OFF}	$V_{GS(OFF)}=7.0V$		-		35		-	ns
t_{OFF}	$V_{GS(OFF)}=5.0V$		-		-		50	ns

All dimensions in inches (mm).



DATA SHEET

LEAD CODE:

- 1) DRAIN
- 2) SOURCE
- 3) GATE