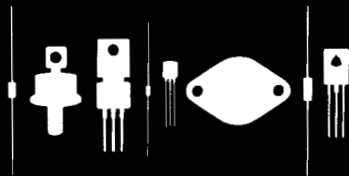


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145 Adams Avenue  
Hauppauge, New York 11788



PN4091  
PN4092  
PN4093

N-CHANNEL SILICON  
FIELD EFFECT TRANSISTOR

JEDEC TO-92 CASE (DSG)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PN4091 series types are silicon N-channel field effect transistors designed for switching applications.

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

	SYMBOL		UNIT
Gate-Drain Voltage	V <sub>GD</sub>	40	V
Gate-Source Voltage	V <sub>GS</sub>	40	V
Drain-Source Voltage	V <sub>DS</sub>	40	V
Gate Current	I <sub>G</sub>	10	mA
Power Dissipation	P <sub>D</sub>	625	W
Operating and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-65 TO +150	°C

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

SYMBOL	TEST CONDITIONS	PN4091		PN4092		PN4093		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
V <sub>DSS</sub>	V <sub>DS</sub> =20V	30		15		8.0		mA
I <sub>D(SG)</sub>	V <sub>SG</sub> =20V		0.2		0.2		0.2	nA
I <sub>D(G)</sub>	V <sub>DG</sub> =20V		0.2		0.2		0.2	nA
I <sub>D(OFF)</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =12V		0.2		-		-	nA
I <sub>D(OFF)</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =8.0V		-		0.2		-	nA
I <sub>D(OFF)</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =6.0V		-		-		0.2	nA
BV <sub>GSS</sub>	I <sub>G</sub> =1.0μA	40		40		40		V
BV <sub>DGO</sub>	I <sub>D</sub> =1.0μA	40		40		40		V
V <sub>GS(OFF)</sub>	V <sub>DS</sub> =20V, I <sub>D</sub> =1.0nA	5.0	10	2.0	7.0	1.0	5.0	V
V <sub>DS(ON)</sub>	I <sub>D</sub> =6.6mA		0.2		-		-	V
V <sub>DS(ON)</sub>	I <sub>D</sub> =4.0mA		-		0.2		-	V
V <sub>DS(ON)</sub>	I <sub>D</sub> =2.5mA		-		-		0.2	V
r <sub>DS(ON)</sub>	I <sub>D</sub> =1.0mA		30		50		80	Ω
r <sub>ds(ON)</sub>	V <sub>GS</sub> =0, I <sub>D</sub> =0, f=1.0kHz		30		50		80	Ω
C <sub>iss</sub>	V <sub>DS</sub> =20V, V <sub>GS</sub> =0, f=1.0MHz		16		16		16	pF
C <sub>rss</sub>	V <sub>DS</sub> =0, V <sub>GS</sub> =20V, f=1.0MHz		5.0		5.0		5.0	pF
t <sub>ON</sub>	I <sub>D(ON)</sub> =6.6mA		25		-		-	ns
t <sub>ON</sub>	I <sub>D(ON)</sub> =4.0mA		-		35		-	ns
t <sub>ON</sub>	I <sub>D(ON)</sub> =2.5mA		-		-		60	ns
t <sub>OFF</sub>	V <sub>GS(OFF)</sub> =12V		40		-		-	ns
t <sub>OFF</sub>	V <sub>GS(OFF)</sub> =8.0V		-		60		-	ns
t <sub>OFF</sub>	V <sub>GS(OFF)</sub> =6.0V		-		-		80	ns

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