

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

J174

J175

J176

J177

P CHANNEL JUNCTION FET

JEDEC TO-92 CASE

**DESCRIPTION**

The CENTRAL SEMICONDUCTOR J174 Series types are Silicon P Channel Junction Field Effect Transistors designed for switching applications.

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

	SYMBOL		UNIT
Gate-Drain Voltage	$V_{GD}$	30	V
Gate-Source Voltage	$V_{GS}$	30	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	$^\circ\text{C}$

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

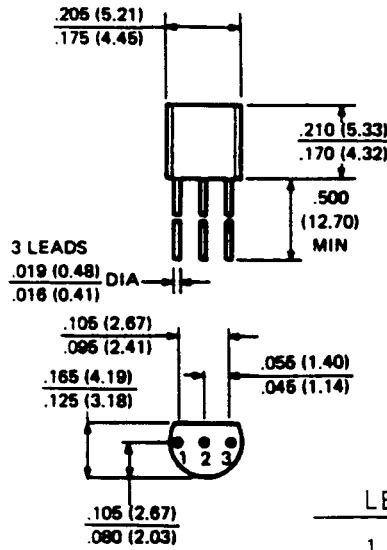
SYMBOL	TEST CONDITIONS	J174		J175		J176		J177		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
$I_{GSS}$	$V_{GS}=20V$		1.0		1.0		1.0		1.0	nA
$I_{DSS}$	$V_{DS}=15V$	20	100	7	60	2	25	1.5	20	mA
$BV_{GSS}$	$I_G=1.0\mu A$	30		30		30		30		V
$V_{GS(OFF)}$	$V_{DS}=15V, I_D=10nA$	5	10	3	6	1	4	0.8	2.25	V
$r_{DS(ON)}$	$V_{DS}=0.1V$		85		125		250		300	$\Omega$
$I_D(OFF)$	$V_{GS}=10V, V_{DS}=15V$		1.0		1.0		1.0		1.0	nA
$C_{dg(OFF)}$	$V_{GS}=10V, V_{DS}=0, f=1.0MHz$	5.5 TYP		5.5 TYP		5.5 TYP		5.5 TYP		pF
$C_{sg(OFF)}$	$V_{GS}=10V, V_{DS}=0, f=1.0MHz$	5.5 TYP		5.5 TYP		5.5 TYP		5.5 TYP		pF
$C_{dg(ON)}$	$V_{GS}=0, V_{DS}=0, f=1.0MHz$	40 TYP		40 TYP		40 TYP		40 TYP		pF
$C_{sg(ON)}$	$V_{GS}=0, V_{DS}=0, f=1.0MHz$	40 TYP		40 TYP		40 TYP		40 TYP		pF
$t_d(ON)$	*	2.0 TYP		5.0 TYP		15 TYP		20 TYP		ns
$t_r$	*	5.0 TYP		10 TYP		20 TYP		25 TYP		ns
$t_d(OFF)$	*	5.0 TYP		10 TYP		15 TYP		20 TYP		ns
$t_f$	*	10 TYP		20 TYP		20 TYP		25 TYP		ns

**\*TEST CONDITIONS:**

J174	$V_{DD}=10V, V_{GS(ON)}=0, R_L=560\Omega, V_{GS(OFF)}=12V$
J175	$V_{DD}=6.0V, V_{GS(ON)}=0, R_L=12k\Omega, V_{GS(OFF)}=8.0V$
J176	$V_{DD}=6.0V, V_{GS(ON)}=0, R_L=5.6k\Omega, V_{GS(OFF)}=6.0V$
J177	$V_{DD}=6.0V, V_{GS(ON)}=0, R_L=10k\Omega, V_{GS(OFF)}=3.0V$

SEE REVERSE FOR OUTLINE DRAWING

OUTLINE DRAWING



LEAD CODE

- 1. DRAIN
- 2. GATE
- 3. SOURCE

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