

CentralTM 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)

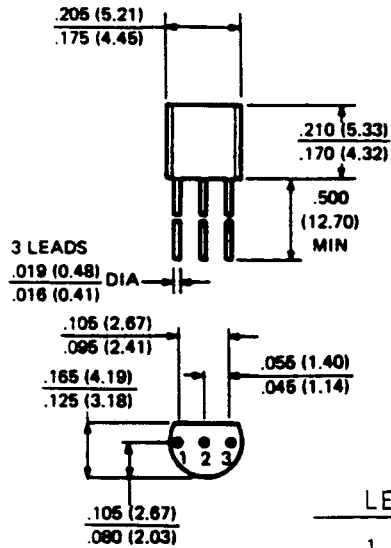
SYMBOL	TEST CONDITIONS	J174		J175		J176		J177		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
I_{GSS}	$V_{GS}=20V$		1.0		1.0		1.0		1.0	nA
I_{DSS}	$V_{DS}=15V$	20	100	7	60	2	25	1.5	20	mA
BV_{GSS}	$I_G=1.0\mu\text{A}$	30		30		30		30		V
$V_{GS(OFF)}$	$V_{DS}=15V, I_D=10\text{nA}$	5	10	3	6	1	4	0.8	2.25	V
$r_{DS(ON)}$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



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