J174, J175

P-Channel Silicon Junction Field-Effect Transistor

- Choppers
- Commutators
- Analog Switches

Absolute maximum ratings at T_A = 25°C

Reverse Gate Source & Reverse Gate Drain Voltage	– 30 V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	360 mW
Power Derating	3.27 mW/°C

At 25°C free air temperature:		J174		J175		Process PJ99		
Static Electrical Characteristics		**Min**	**Max**	**Min**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	30		30		V	I_G = 1 µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}		1		1	nA	V_{GS} = 20V, V_{DS} = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	5	10	3	6	V	V_{DS} = – 15V, I_D = – 10 nA	
Drain Saturation Current (Pulsed)	I_{DSS}	– 20	– 125	– 7	– 70	mA	V_{DS} = – 15V, V_{GS} = ØV	
Drain Cutoff Current	$I_{D(OFF)}$		– 1		– 1	nA	V_{DS} = – 15V, V_{GS} = 10V	
Dynamic Electrical Characteristics			**Max**		**Max**			
Drain Source ON Resistance	$r_{ds(on)}$		85		85	Ω	V_{GS} = Ø, V_{DS} < = 0.1V	f = 1 kHz
Dynamic Electrical Characteristics			**Typ**		**Typ**			
Drain Gate Capacitance	C_{gd}		5.5		5.5	pF	V_{DS} = ØV, V_{GS} = 10V	f = 1 MHz
Source Gate Capacitance	C_{gs}		5.5		5.5	pF	V_{DS} = ØV, V_{GS} = 10V	f = 1 MHz
Drain Gate + Source Gate Capacitance	C_{gd} + C_{gs}		32		32	pF	V_{DS} = V_{GS} = ØV	f = 1 MHz
Switching Characteristics								
Turn ON Delay Time	$td_{(on)}$		2		5	ns		
Rise Time	t_r		5		10	ns		
Turn OFF Delay Time	$td_{(off)}$		5		10	ns		
Fall Time	t_f		10		20	ns		

	J174	J175	
V_{DD}	– 10	– 6	V
$V_{GS(OFF)}$	12	8	V
R_L	560	1.2 k	Ω
$V_{GS(ON)}$	Ø	Ø	V

TO-226AA Package
Dimensions in Inches (mm)

Pin Configuration
1 Drain, 2 Gate, 3 Source

Surface Mount
SMPJ174, SMPJ175

InterFET Corporation
1000 N. Shiloh Road, Garland, TX 75042
(972) 487-1287 FAX (972) 276-3375

www.interfet.com