P1086, P1087

P-Channel Silicon Junction Field-Effect Transistor

- Choppers
- 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:		P1086		P1087		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}		2		2	nA	V_{GS} = 15V, V_{DS} = ØV	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$		10		5	V	V_{DS} = – 15V, I_D = – 1 µA	
Saturation Drain Current (Pulsed)	I_{DSS}	– 10		– 5.0		mA	V_{DS} = – 20V, V_{GS} = ØV	
Drain Cutoff Current	$I_{D(OFF)}$		– 10		– 10	nA	V_{DS} = – 15V, V_{GS} = 12V (P1086)	
			– 0.5		– 0.5	µA	V_{GS} = 7V (P1087)	T_A = 85°C
Drain Reverse Current	I_{DGO}		2		2	nA	V_{DG} = – 15V, I_S = ØA	
			0.1		0.1	µA	V_{DG} = – 15V, I_S = ØA	T_A = 85°C
Drain Source ON Voltage	$V_{DS(ON)}$		– 0.5		– 0.5	V	V_{GS} = ØV, I_D = – 6 mA (P1086)	
			– 0.5		– 0.5	V	V_{GS} = ØV, I_D = – 3 mA (P1087)	
Static Drain Source ON Resistance	$r_{DS(ON)}$		75		150	Ω	I_D = – 1 mA, V_{GS} = ØV	
Dynamic Electrical Characteristics								
Drain Source ON Resistance	$r_{ds(on)}$		75		150	Ω	I_D = Ø, V_{GS} = ØV	f = 1 kHz
Common Source Input Capacitance	C_{iss}		45		45	pF	V_{DS} = – 15V, V_{GS} = ØV	f = 1 kHz
Common Source Reverse Transfer Capacitance	C_{rss}		10		10	pF	V_{DS} = ØV, V_{GS} = 12V (P1086)	f = 1 MHz
			10		10	pF	V_{DS} = ØV, V_{GS} = 7V (P1087)	
Switching Characteristics								
Turn ON Delay Time	$td_{(on)}$		15		15	ns	V_{DD} = – 6V, $V_{GS(ON)}$ = ØV	
Rise Time	t_r		20		75	ns		
Turn OFF Delay Time	$td_{(off)}$		15		25	ns		
Fall Time	t_f		50		100	ns		

	P1086	P1087	
$V_{GS(OFF)}$	12	7	V
$V_{D(ON)}$	– 6	– 3	MA
R_L	910	1.8K	Ω

TO-226AA Package
Dimensions in Inches (mm)

Pin Configuration
1 Source, 2 Drain, 3 Gate

Surface Mount
SMPP1086, SMPP1087

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

www.interfet.com