2N4091, 2N4092, 2N4093

N-Channel Silicon Junction Field-Effect Transistor

- **Low $r_{DS(on)}$**
- **$I_{D(off)}$ < 100 pA**
- **Fast Switching**

Absolute maximum ratings at $T_A = 25^oC$

Reverse Gate Source & Gate Drain Voltage	-40V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	300 mW
Power Derating	1.7 mW/^{o}C
Storage Temperature Range	-65^{o}C to +150^{o}C

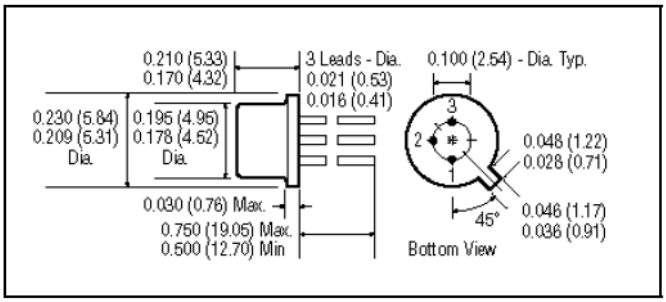
At 25°C free air temperature		**2N4091**		**2N4092**		**2N4093**		**Process NJ132**		
Static Electrical Characteristics		**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	-40		-40		-40		V	I_G = -1 uA, V_{DS} = 0 V	
Gate Reverse Current	I_{GSS}		200		200		200	pA	V_{GS} = -10 V, V_{DS} = 0 V	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	-5	-10	-2	-7	-1	-5	V	V_{DS} = 10 V, V_{GS} = 0 V	
Drain Saturation Current (pulsed)	I_{DSS}	30		15		5		mA	V_{DS} = 10 V, V_{GS} = 0 V	
Dynamic Electrical Characteristics										
Drain -Source On Resistance	$r_{ds(on)}$		30		50		80	Ω	V_{GS} = 0 V, I_D = 0 V	f = 1 kHz
Common-Source Input Capacitance	C_{iss}		16		16		16	pF	V_{DS} = -10 V, V_{GS} = 1 V	f = 1 MHz
Common-Source Reverse Transfer Capacitance	C_{rss}		5		5		5	pF	V_{DS} = 10 V, I_D = 5 mA	f = 1 MHz
Turn-On Delay Time	t_d		15		15		20	nS	V_{DD} = 10 V, $V_{GS(on)}$ = 0V	
Rise Time	t_r		10		20		40	nS	V_{DD} = 10 V, $V_{GS(on)}$ = 0V	
Turn-Off Time	t_{off}		40		60		80	nS	V_{DD} = 10 V, $V_{GS(on)}$ = 0V	

TO-18 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source 1, 2 Gate & Case, 3 Drain



Surface Mount - SMP4091, SMP4092, SMP4093

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