6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

TECHNICAL DATA SHEET

N-CHANNEL J-FET

Equivalent To MIL-PRF-19500/431

DEVICES

2N4091
2N4092
2N4093

LEVELS

MQ = JAN Equivalent
MX = JANTX Equivalent
MV = JANTXV Equivalent

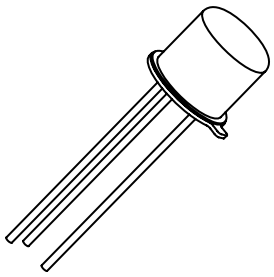
ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Gate-Source Voltage	V_{GS}	-40	V
Drain-Source Voltage	V_{DS}	40	V
Drain-Gate Voltage	V_{DG}	40	V
Gate Current	I_G	10	mAdc
Power Dissipation(1) T_A = +25°C	P_T	0.36	W
Operating Junction	T_j	-65 to +175	°C
Operating Storage Temperature Range	T_{stg}	-65 to +200	°C

(1) Derate linearly 2.4 mW/°C for T_A > 25°C.

ELECTRICAL CHARACTERISTICS *(T_A = +25°C, unless otherwise noted)*

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Gate-Source Breakdown Voltage V_{DS} = 0, I_G = -1.0μA dc		$V_{(BR)GSS}$	-40		Vdc
Gate Reverse Current V_{DS} = 0, V_{GS} = -20V dc		I_{GSS}		-0.1	ηA
Drain Current V_{GS} = -12V dc, V_{DS} = 20V dc V_{GS} = -8.0V dc, V_{DS} = 20V dc V_{GS} = -6.0V dc, V_{DS} = 20V dc	2N4091 2N4092 2N4093	$I_{D(off)}$		-0.1	ηA
Drain Current V_{GS} = 0, V_{DS} = 20V dc	2N4091 2N4092 2N4093	I_{DSS}	30 15 8.0		mA
Drain-Source On-State Voltage V_{GS} = 0, I_D = 6.6mA dc V_{GS} = 0, I_D = 4.0mA dc V_{GS} = 0, I_D = 2.5mA dc	2N4091 2N4092 2N4093	$V_{DS(on)}$		0.2 0.2 0.2	Vdc
Static Drain-Source On-State Resistance V_{GS} = 0, I_D = 1.0mA dc	2N4091 2N4092 2N4093	$r_{DS(on)}$		30 50 80	Ω



TO-18
(TO-206AA)

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TECHNICAL DATA SHEET

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DYNAMIC CHARACTERISTICS

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Small-Signal, Common-Source Reverse Transfer Capacitance V_{GS} = 20V dc, V_{DS} = 0, f = 1.0MHz	C_{rss}		5.0	pF
Small-Signal, Common-Source Short-Circuit Input Capacitance V_{GS} = 0, V_{DS} = 20V dc, f = 1.0MHz	C_{iss}		16	pF

SWITCHING CHARACTERISTICS

Parameters / Test Conditions			Symbol	Min.	Max.	Unit
Turn-On Delay Time	2N4091 2N4092 2N4093	See Figure 3 of MIL-PRF-19500/431	t_{don}		15 15 15	ηs
Rise Time	2N4091 2N4092 2N4093		t_r		10 20 40	ηs
Turn-Off Delay Time	2N4091 2N4092 2N4093		t_{doff}		40 60 80	ηs