Microsemi LAWRENCE

TECHNICAL DATA

N-CHANNEL J-FET
Qualified per MIL-PRF-19500/431

Devices			Qualified Level
2N4091	**2N4092**	**2N4093**	**JANTX** **JANTXV**

ABSOLUTE MAXIMUM RATINGS (T_A = +25^{0}C unless otherwise noted)

Parameters / Test Conditions		Symbol	Value	Units
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^{0}C	P_T	0.36	W
Operating Junction		T_j	-65 to +175	^{0}C
Operating Storage Temperature Range		T_{stg}	-65 to +200	^{0}C

(1) Derate linearly 2.4 mW/^{0}C for T_A > 25^{0}C.
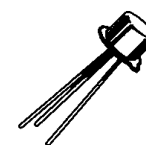
TO-18*
(TO-206AA)

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS (T_C = +25^{0}C unless otherwise noted)

PARAMETERS / TEST CONDITIONS		Symbol	Min.	Max.	Units
Gate-Source Breakdown Voltage V_{DS} = 0, I_G = -1.0 μAdc		$V_{(BR)GSS}$	-40		Vdc
Gate Reverse Current V_{DS} = 0, V_{GS} = -20 Vdc		I_{GSS}		-0.1	ηA

Drain Current
  V_{GS} = -12, V_{DS} = 20 Vdc
  V_{GS} = -8.0, V_{DS} = 20 Vdc
  V_{GS} = -6.0, V_{DS} = 20 Vdc
	2N4091
	2N4092
	2N4093
		$I_{D(off)}$		0.1	ηA

Drain Current V_{GS} = 0, V_{DS} = 20 Vdc	2N4091 2N4092 2N4093	I_{DSS}	30 15 8.0		mA

ELECTRICAL CHARACTERISTICS ($T_C = 25^0$C unless otherwise noted) (con't)

PARAMETERS / TEST CONDITIONS		Symbol	Min.	Max.	Units
Static Drain - Source On-State Resistance $V_{GS} = 0$, $I_D = 1.0$ mAdc　　　　　2N4091 2N4092 2N4093		$r_{DS(on)}$		30 50 80	Ω
Drain - Source On-State Voltage $V_{GS} = 0$, $I_D = 6.6$ mAdc　　　　　2N4091 $V_{GS} = 0$, $I_D = 4.0$ mAdc　　　　　2N4092 $V_{GS} = 0$, $I_D = 2.5$ mAdc　　　　　2N4093		$V_{DS(on)}$		0.2 0.2 0.2	Vdc
Small-Signal, Common-Source Reverse Transfer Capacitance $V_{GS} = 20$ Vdc, $V_{DS} = 0$, f = 1.0 MHz		C_{rss}		5.0	pF
Small-Signal, Common-Source Short-Circuit Input Capacitance $V_{GS} = 0$, $V_{DS} = 20$ Vdc, f = 1.0 MHz		C_{iss}		16	pF
Turn-On Delay Time　　2N4091 2N4092 2N4093	See Figure 3 of MIL-PRF- 19500/431	${}^t d_{on}$		15 15 15	ηs
Rise Time　　2N4091 2N4092 2N4093		${}^t r$		10 20 40	ηs
Turn-Off Delay Time　　2N4091 2N4092 2N4093		${}^t d_{off}$		40 60 80	ηs