Microsemi LAWRENCE

TECHNICAL DATA

N-CHANNEL J-FET

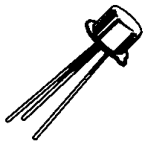
Qualified per MIL-PRF-19500 / 431

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		$r_{DS(on)}$		30	Ω
	2N4092				50	
	2N4093				80	
Drain - Source On-State Voltage						
V_{GS} = 0, I_D = 6.6 mAdc	2N4091		$V_{DS(on)}$		0.2	Vdc
V_{GS} = 0, I_D = 4.0 mAdc	2N4092				0.2	
V_{GS} = 0, I_D = 2.5 mAdc	2N4093				0.2	
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	See Figure 3 of MIL-PRF-19500/431	$^td_{on}$		15	ηs
	2N4092				15	
	2N4093				15	
Rise Time	2N4091		^tr		10	ηs
	2N4092				20	
	2N4093				40	
Turn-Off Delay Time	2N4091		$^td_{off}$		40	ηs
	2N4092				60	
	2N4093				80	

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