



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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N-CHANNEL J-FET

Equivalent To MIL-PRF-19500/431

DEVICES

2N4091
2N4092
2N4093

LEVELS

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

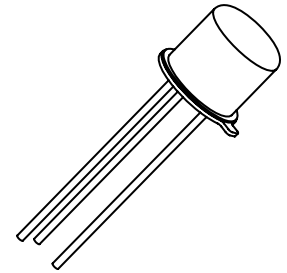
ABSOLUTE MAXIMUM RATINGS ($T_C = +25^\circ\text{C}$ unless otherwise noted)

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⁾ $T_A = +25^\circ\text{C}$	P_T	0.36	W
Operating Junction	T_j	-65 to +175	$^\circ\text{C}$
Operating Storage Temperature Range	T_{stg}	-65 to +200	$^\circ\text{C}$

(1) Derate linearly 2.4 mW/ $^\circ\text{C}$ for $T_A > 25^\circ\text{C}$.

ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$, unless otherwise noted)

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



TO-18
(TO-206AA)



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	t_{don}	See Figure 3 of MIL-PRF-19500/431	15	ηs
			15	
Rise Time	t_r	See Figure 3 of MIL-PRF-19500/431	10	ηs
			20	
			40	
Turn-Off Delay Time	t_{doff}	See Figure 3 of MIL-PRF-19500/431	40	ηs
			60	
			80	