

2N4091 JANTX, JANTXV

2N4092 JANTX, JANTXV

2N4093 JANTX, JANTXV

POWER MOSFET

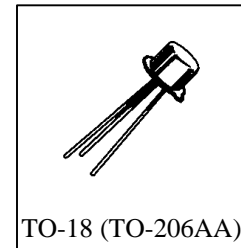
N CHANNEL



Processed per MIL-PRF-19500/431

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

PARAMETERS / TEST CONDITIONS	SYMBOL	MIN.	MAX.	UNITS
Gate-Source Breakdown Voltage $V_{DS} = 0, I_G = -1.0 \mu\text{A dc}$	$V_{(BR)GSS}$	-40		Vdc
Gate-Source Cutoff Voltage $V_{DS} = 20 \text{ Vdc}, I_D = 1.0 \eta\text{A dc}$	$V_{GS(off)}$	2N4091 -5.0	-10	Vdc
2N4092 -2.0		-7.0		
2N4093 -1.0		-5.0		
Gate Reverse Current $V_{DS} = 0, V_{GS} = -20 \text{ Vdc}$	I_{GSS}		-0.1	ηA
Drain Current $V_{GS} = -12, V_{DS} = 20 \text{ Vdc}$	$I_{D(off)}$	2N4091		ηA
$V_{GS} = -8.0, V_{DS} = 20 \text{ Vdc}$		2N4092	0.1	
$V_{GS} = -6.0, V_{DS} = 20 \text{ Vdc}$		2N4093		
Drain Current $V_{GS} = 0, V_{DS} = 20 \text{ Vdc}$	I_{DSS}	30 15 8.0		mA
Static Drain - Source On-State Resistance $V_{GS} = 0, I_D = 1.0 \text{ mA dc}$	$r_{DS(on)}$	2N4091	30	Ω
2N4092		50		
2N4093		80		

2N4091, 2N4092, 2N4093 JAN SERIES

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}\text{C}$ unless otherwise noted) (con't)

PARAMETERS / TEST CONDITIONS	SYMBOL	MIN.	MAX.	UNITS
Drain - Source On-State Voltage $V_{GS} = 0, I_D = 6.6 \text{ mAdc}$ 2N4091 $V_{GS} = 0, I_D = 4.0 \text{ mAdc}$ 2N4092 $V_{GS} = 0, I_D = 2.5 \text{ mAdc}$ 2N4093	$V_{DS(on)}$		0.2 0.2 0.2	Vdc
Small-Signal, Common-Source Reverse Transfer Capacitance $V_{GS} = 20 \text{ Vdc}, V_{DS} = 0, f = 1.0 \text{ MHz}$	C_{rss}		5.0	pF
Small-Signal, Common-Source Short-Circuit Input Capacitance $V_{GS} = 0, V_{DS} = 20 \text{ Vdc}, f = 1.0 \text{ MHz}$	C_{iss}		16	pF