NEW ENGLAND SEMICONDUCTOR

Technical Data

2N4091 JANTX, JANTXV
2N4092 JANTX, JANTXV
2N4093 JANTX, JANTXV

MIL-PRF QPL DEVICES

POWER MOSFET
N CHANNEL

Processed per MIL-PRF-19500/431

ABSOLUTE MAXIMUM RATINGS (T_C = 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
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)

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-Source Cutoff Voltage V_{DS} = 20 Vdc, I_D = 1.0 ηAdc	2N4091 2N4092 2N4093	$V_{GS(off)}$	-5.0 -2.0 -1.0	-10 -7.0 -5.0	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
Static Drain - Source On-State Resistance V_{GS} = 0, I_D = 1.0 mAdc	2N4091 2N4092 2N4093	$r_{DS(on)}$		30 50 80	Ω

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / Fax: (978) 689-0803

ELECTRICAL CHARACTERISTICS (T_C = 25^{0}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 mAdc	2N4091			0.2	
V_{GS} = 0, I_D = 4.0 mAdc	2N4092	$V_{DS(on)}$		0.2	Vdc
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