6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http: //www.microsemi.com

TECHNICAL DATA SHEET

N-CHANNEL MOSFET

Qualified per MIL-PRF-19500/557

DEVICES

2N6796 2N6796U

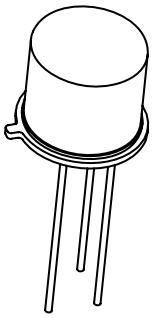
LEVELS

JAN
JANTX
JANTXV

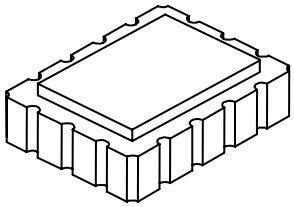
ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Drain – Source Voltage	V_{DS}	100	Vdc
Gate – Source Voltage	V_{GS}	± 20	Vdc
Continuous Drain Current T_C = +25°C	I_{D1}	8.0	Adc
Continuous Drain Current T_C = +100°C	I_{D2}	5.0	Adc
Max. Power Dissipation	P_{tl}	25 (1)	W
Drain to Source On State Resistance	$R_{ds(on)}$	0.18 (2)	Ω
Operating & Storage Temperature	T_{op}, T_{stg}	-55 to +150	°C

Note: (1) Derated Linearly by 0.2 W/°C for T_C > +25°C
(2) V_{GS} = 10Vdc, I_D = 5.0A



TO-205AF
(formerly TO-39)



U – 18 LCC

ELECTRICAL CHARACTERISTICS *(T_A = +25°C, unless otherwise noted)*

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Drain-Source Breakdown Voltage V_{GS} = 0V, I_D = 1mAdc	$V_{(BR)DSS}$	100		Vdc
Gate-Source Voltage (Threshold) $V_{DS} \geq V_{GS}$, I_D = 0.25mA $V_{DS} \geq V_{GS}$, I_D = 0.25mA, T_j = +125°C $V_{DS} \geq V_{GS}$, I_D = 0.25mA, T_j = -55°C	 $V_{GS(th)1}$ $V_{GS(th)2}$ $V_{GS(th)3}$	 2.0 1.0	 4.0 5.0	Vdc
Gate Current V_{GS} = ±20V, V_{DS} = 0V V_{GS} = ±20V, V_{DS} = 0V, T_j = +125°C	 I_{GSS1} I_{GSS2}		 ±100 ±200	nAdc
Drain Current V_{GS} = 0V, V_{DS} = 80V V_{GS} = 0V, V_{DS} = 80V, T_j = +125°C	 I_{DSS1} I_{DSS2}		 25 0.25	 µAdc mAdc
Static Drain-Source On-State Resistance V_{GS} = 10V, I_D = 5.0A pulsed V_{GS} = 10V, I_D = 8.0A pulsed T_j = +125°C V_{GS} = 10V, I_D = 5.0A pulsed	 $r_{DS(on)1}$ $r_{DS(on)2}$ $r_{DS(on)3}$		 0.18 0.195 0.35	 Ω Ω Ω
Diode Forward Voltage V_{GS} = 0V, I_D = 8.0A pulsed	V_{SD}		1.5	Vdc

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DYNAMIC CHARACTERISTICS

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Gate Charge: On-State Gate Charge Gate to Source Charge Gate to Drain Charge	V_{GS} = 10V, I_D = 8.0A V_{DS} = 50V	 $Q_{g(on)}$ Q_{gs} Q_{gd}		 28.51 6.34 16.59	nC

SWITCHING CHARACTERISTICS

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Switching time tests: Turn-on delay time Rinse time Turn-off delay time Fall time	I_D = 8.0A, V_{GS} = 10Vdc, Gate drive impedance = 7.5Ω, V_{DD} = 30Vdc	 $t_{d(on)}$ t_r $t_{d(off)}$ t_f		 30 75 40 45	ns
Diode Reverse Recovery Time	di/dt ≤ 100A/µs, V_{DD} ≤ 50V, I_F = 8.0A	t_{rr}		300	ns