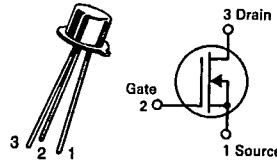


2N3796
2N3797

CASE 22-03, STYLE 2
TO-18 (TO-206AA)



MOSFETs
LOW POWER AUDIO
N-CHANNEL — DEPLETION

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	25	Vdc
2N3796 2N3797		20	
Gate-Source Voltage	V _{GS}	±10	Vdc
Drain Current	I _D	20	mAdc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	200	mW
		1.14	
Junction Temperature Range	T _J	+175	°C
Storage Channel Temperature Range	T _{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Drain-Source Breakdown Voltage (V _{GS} = -4.0 V, I _D = 5.0 μA) (V _{GS} = -7.0 V, I _D = 5.0 μA)	V _{(BR)DSX}	25	30	—	Vdc
2N3796 2N3797		20	25	—	
Gate Reverse Current(1) (V _{GS} = -10 V, V _{DS} = 0) (V _{GS} = -10 V, V _{DS} = 0, T _A = 150°C)	I _{GSS}	—	—	1.0 200	pAdc
Gate Source Cutoff Voltage (I _D = 0.5 μA, V _{DS} = 10 V) (I _D = 2.0 μA, V _{DS} = 10 V)	V _{GS(off)}	—	-3.0	-4.0	Vdc
2N3796 2N3797		—	-5.0	-7.0	
Drain-Gate Reverse Current(1) (V _{DG} = 10 V, I _S = 0)	I _{DGO}	—	—	1.0	pAdc

ON CHARACTERISTICS

Zero-Gate-Voltage Drain Current (V _{DS} = 10 V, V _{GS} = 0)	I _{DSS}	0.5	1.5	3.0	mAdc
2N3796 2N3797		2.0	2.9	6.0	
On-State Drain Current (V _{DS} = 10 V, V _{GS} = +3.5 V)	I _{D(on)}	7.0	8.3	14	mAdc
2N3796 2N3797		9.0	14	18	

SMALL-SIGNAL CHARACTERISTICS

Forward Transfer Admittance (V _{DS} = 10 V, V _{GS} = 0, f = 1.0 kHz)	y _{fs}	900	1200	1800	μmhos
2N3796 2N3797		1500	2300	3000	
(V _{DS} = 10 V, V _{GS} = 0, f = 1.0 MHz)	y _{os}	900	—	—	μmhos
2N3796 2N3797		1500	—	—	
Output Admittance (V _{DS} = 10 V, V _{GS} = 0, f = 1.0 kHz)	y _{os}	—	12	25	μmhos
2N3796 2N3797		—	27	60	
Input Capacitance (V _{DS} = 10 V, V _{GS} = 0, f = 1.0 MHz)	C _{iss}	—	5.0	7.0	pF
2N3796 2N3797		—	6.0	8.0	
Reverse Transfer Capacitance (V _{DS} = 10 V, V _{GS} = 0, f = 1.0 MHz)	C _{rss}	—	0.5	0.8	pF

FUNCTIONAL CHARACTERISTICS

Noise Figure (V _{DS} = 10 V, V _{GS} = 0, f = 1.0 kHz, R _S = 3 megohms)	NF	—	3.8	—	dB
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(1) This value of current includes both the FET leakage current as well as the leakage current associated with the test socket and fixture when measured under best attainable conditions.

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TYPICAL DRAIN CHARACTERISTICS

FIGURE 1 — 2N3796

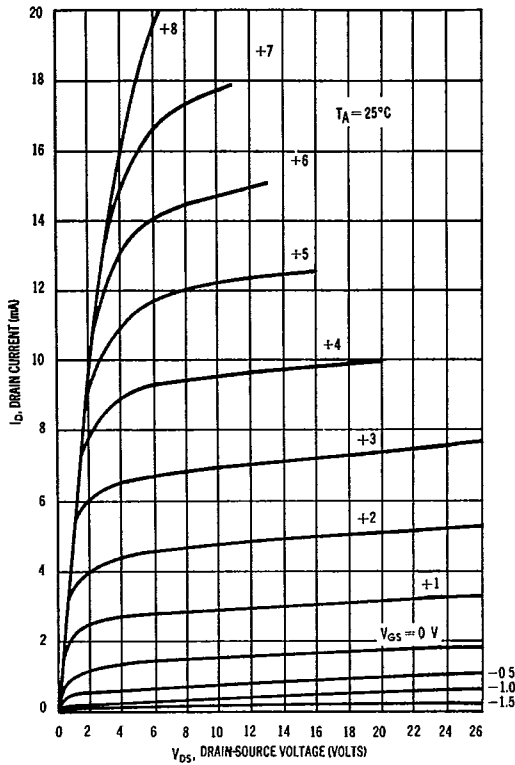
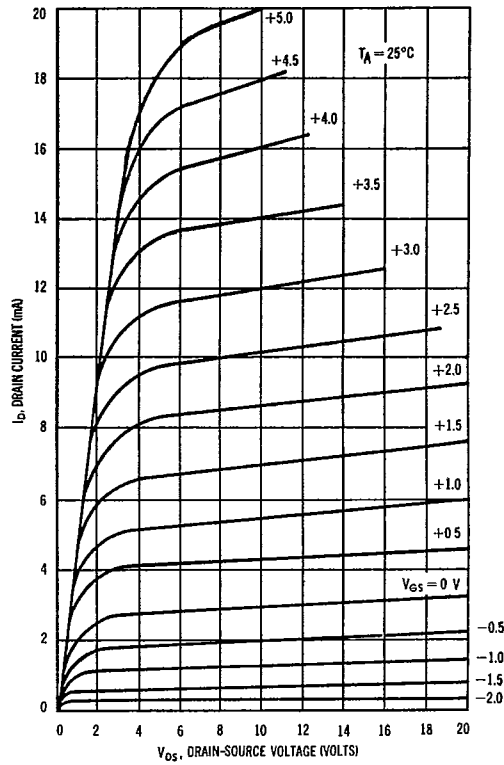


FIGURE 2 — 2N3797



COMMON SOURCE TRANSFER CHARACTERISTICS

FIGURE 3 — 2N3796

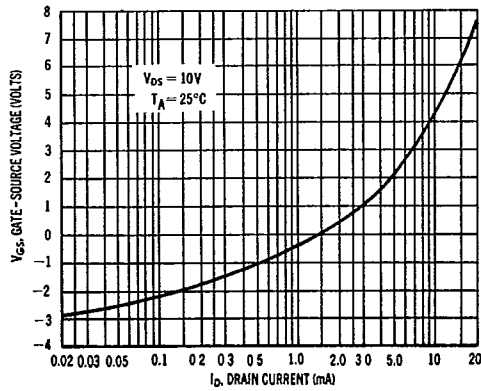
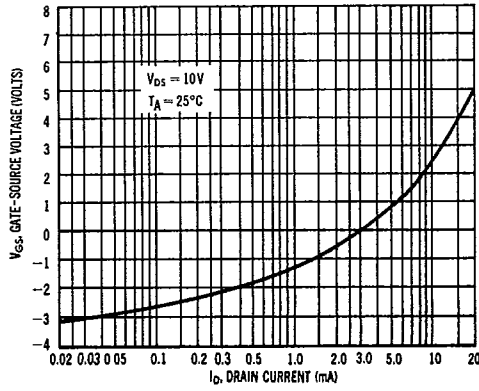


FIGURE 4 — 2N3797



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FIGURE 5 — FORWARD TRANSFER ADMITTANCE

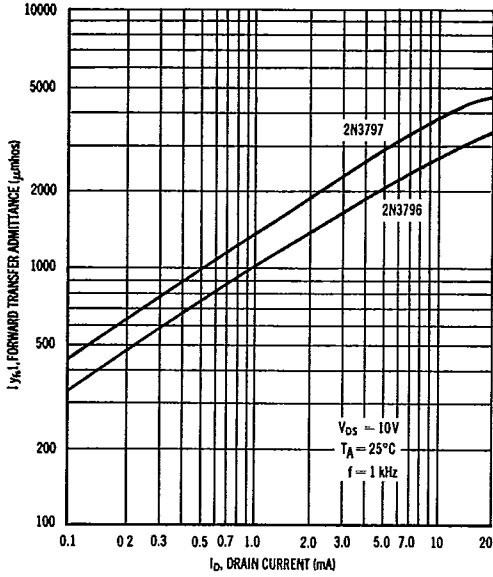
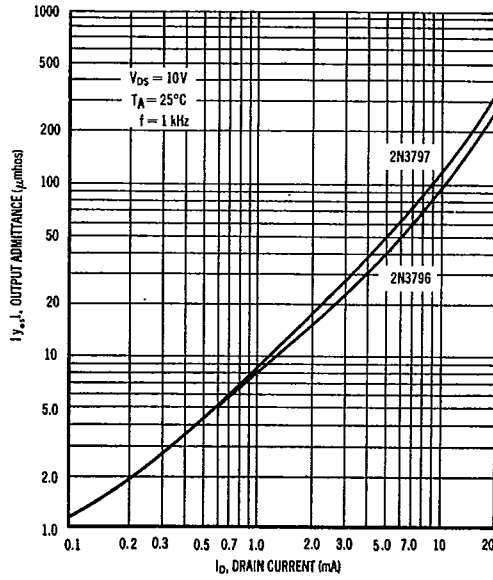


FIGURE 6 — OUTPUT ADMITTANCE



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FIGURE 7 — NOISE FIGURE

