



Devices, Inc.

PRODUCT CATALOG ORDERING INFORMATION

MOS AND JUNCTION FIELD EFFECT TRANSISTOR CHIPS

The following is the product code index for J-FET and MOS FET DIE/WAFERS having 2N, 3N JEDEC prefixes.

This product code index is Solitron San Diego's standard for Q. A. production, marketing and sales.

All products that deviate from the standard JEDEC electrical parameters or the following conditions must be assigned a Solitron special house number (SXXXX). These exact deviations must be in the form of a letter, TWX or print.

KDXXXX	Tested die packaged in carrier arrays (waffle pack)
KVXXXX	Tested die packaged in freon filled vials.
WCXXXX	Unprobed wafers classed into specified JEDEC part number (S), Not scribed or sawed.
WDXXXX	Tested and inked wafer, sawed and broken on expanded plastic.
WWXXXX	Tested and inked wafer, Not scribed or sawed.

1. The above part numbers meet or exceed Solitron's QA 86 optical requirements.
2. To order or identify optical requirements to MIL-SDT-750 method 2072 for J-FETS or MIL-SDT-883, method 2010 for MOS FETS, use the suffix "M"
(Example: PN 2N5114 to MIL-SDT-750, method 2072, die in carrier waffle pack use KD5114M as the part number).
3. All red inked die on probed wafers do not meet specified electrical parameters.

JEDEC	GEOMETRY	JEDEC	GEOMETRY	JEDEC	GEOMETRY	JEDEC	GEOMETRY
2N2386	FP 5.3	2N3367	FN 22.2	2N3686A	FN 22.2	2N3957	DMN 23.2
2N2497	FP 5.3	2N3368	FN 3.6	2N3687	FN 22.2	2N3958	FN 22.2
2N2498	FP 5.3	2N3369	FN 22.2	2N3687A	FN 22.2	2N3958	DMN 23.2
2N2499	FP 5.3	2N3370	FN 22.2	2N3695	FP 22.2	2N3966	FN 2.5
2N2500	FP 5.3	2N3376	FP 22.2	2N3696	FP 22.2	2N3967	FN 2.5
2N2606	FP 22.2	2N3378	FP 22.2	2N3697	FP 22.2	2N3968	FN 3.6
2N2607	FP 22.2	2N3379	FP 22.2	2N3698	FP 22.2	2N3969	FN 3.6
2N2607	FP 5.3	2N3380	FP 22.2	2N3819	FN 2.5	2N3970	FN 7.1
2N2608	FP 22.2	2N3382	FP 7.3	2N3820	FP 5.3	2N3971	FN 7.1
2N2608	FP 5.3	2N3384	FP 7.3	2N3821	FN 3.6	2N3972	FN 7.1
2N2609	FP 5.3	2N3386	FP 7.3	2N3822	FN 3.6	2N3993	FP 7.3
2N2841	FP 22.2	2N3436	FN 3.6	2N3823	FN 2.5	2N3994	FP 7.3
2N2842	FP 22.2	2N3437	FN 3.6	2N3824	FN 3.6	2N4003	FN 2.5
2N2842	FP 5.3	2N3438	FN 3.6	2N3909	FP 5.3	2N4065	FMP 1.1
2N2843	FP 5.3	2N3452	FN 2.2	2N3909A	FP 5.3	2N4084	DMN 113.3
2N2844	FP 5.3	2N3453	FN 2.2	2N3920A	DMN 113.3	2N4084	FN 5.5
2N3068	FP 22.2	2N3454	FN 2.2	2N3921	FM 5.5	2N4085	DMN 113.3
2N3069	FP 22.2	2N3456	FN 2.2	2N3921	DMN 113.3	2N4085	FN 5.5
2N3070	FP 5.3	2N3457	FN 2.2	2N3921	FN 3.6	2N4091	FN 7.1
2N3071	FP 22.2	2N3458	FN 3.6	2N3922	FN 5.5	2N4092	FN 7.1
2N3328	FP 22.2	2N3459	FN 3.6	2N3954	FN 22.2	2N4093	FN 7.1
2N3329	FP 5.3	2N3460	FN 22.2	2N3954	DMN 23.2	2N4116	FN 2.5
2N3330	FP 5.3	2N3684	FN 22.2	2N3955	FN 22.2	2N4117	FN 2.2
2N3331	FP 5.3	2N3684A	FN 22.2	2N3955	DMN 23.2	2N4117A	FN 2.2
2N3332	FP 5.3	2N3685	FN 22.2	2N3956	FN 22.2	2N4118	FN 2.2
2N3365	FN 22.2	2N3685A	FN 22.2	2N3956	DMN 23.2	2N4118A	FN 2.2
2N3366	FN 22.2	2N3686	FN 22.2	2N3957	FN 22.2	2N4119	FN 2.2

Note: Where several elements are listed against a Jecdec part number, the first listed is prime for the Jecdec part number. For critical designs or applications the factory should be consulted.

PRODUCT CATALOG

MOS AND JUNCTION FIELD EFFECT TRANSISTOR CHIPS

JEDEC	GEOMETRY		JEDEC	GEOMETRY		JEDEC	GEOMETRY		JEDEC	GEOMETRY	
2N4119A	FN	2.2	2N4868	FN	88.8	2N5434	FN	9.0	2N5638	FN	7.1
2N4139	FN	88.8	2N4868	FN	39.8	2N5452	FN	22.2	2N5639	FN	7.1
2N4220	FN	22.2	2N4868A	FN	88.8	2N5452	DMN	23.3	2N5640	FN	7.1
2N4220A	FN	22.2	2N4869	FN	88.8	2N5453	FN	22.2	2N5653	FN	7.1
2N4221	FN	3.6	2N4869A	FN	88.8	2N5453	DMN	23.2	2N5654	FN	7.1
2N4221	FN	5.5	2N4977	FN	9.1	2N5453	DMN	23.2	2N5668	FN	2.5
2N4221A	FN	3.6	2N4978	FN	9.1	2N5454	FN	22.2	2N5669	FN	2.5
2N4222	FN	3.6	2N4979	FN	7.1	2N5454	DMN	23.2	2N5670	FN	2.5
2N4222	FN	5.5	2N5013	FN	2.5	2N5457	FN	2.5	2N5902	FN	2.2
2N4222A	FN	3.6	2N5014	FN	2.5	2N5458	FN	2.5	2N5902	DMN	2.4
2N4223	FN	2.5	2N5018	FP	7.3	2N5459	FN	2.5	2N5903	FN	2.2
2N4224	FN	2.5	2N5019	FP	7.3	2N5460	FP	5.3	2N5903	DMN	2.4
2N4302	FN	22.2	2N5020	FP	5.3	2N5461	FP	5.3	2N5904	FN	2.2
2N4303	FN	22.2	2N5021	FP	5.3	2N5462	FP	5.3	2N5904	DMN	2.4
2N4304	FN	22.2	2N5033	FP	5.3	2N5463	FP	5.3	2N5905	FN	2.2
2N4338	FN	22.2	2N5045	FN	3.6	2N5464	FP	5.3	2N5905	DMN	2.4
2N4339	FN	22.2	2N5046	FN	3.6	2N5465	FP	5.3	2N5906	FN	2.2
2N4340	FN	22.2	2N5047	FN	3.6	2N5484	FN	2.5	2N5906	DMN	2.4
2N4341	FN	22.2	2N5078	FN	2.5	2N5485	FN	2.5	2N5907	FN	2.2
2N4341	FN	3.6	2N5105	FN	2.5	2N5486	FN	2.5	2N5907	DMN	2.4
2N4343	FP	5.3	2N5114	FP	7.3	2N5515	FN	39.8	2N5908	FN	2.2
2N4352	FMP	1.1	2N5115	FP	7.3	2N5516	FN	39.8	2N5908	DMN	2.4
2N4353	FMPZ	1.1	2N5116	FP	7.3	2N5517	FN	39.8	2N5909	FN	2.2
2N4360	FP	5.3	2N5163	FN	3.6	2N5518	FN	39.8	2N5909	DMN	2.4
2N4381	FP	5.3	2N5196	FN	22.2	2N5519	FN	39.8	2N5911	DMN	36.1
2N4382	FP	5.3	2N5197	FN	22.2	2N5520	FN	39.8	2N5911	FN	36.1A
2N4391	FN	7.1	2N5198	FN	22.2	2N5521	FN	39.8	2N5912	DMN	36.1
2N4392	FN	7.1	2N5199	FN	22.2	2N5522	FN	39.8	2N5912	FN	36.1A
2N4393	FN	7.1	2N5245	FN	2.5	2N5523	FN	39.8	2N5949	FN	2.5
2N4416	FN	2.5	2N5246	FN	2.5	2N5524	FN	39.8	2N5950	FN	2.5
2N4416A	FN	2.5	2N5247	FN	2.5	2N5545	FN	3.6	2N5951	FN	2.5
2N4417	FN	2.5	2N5248	FN	2.5	2N5545	DMN	23.2	2N5952	FN	2.5
2N4445	FN	9.1	2N5268	FP	5.3	2N5546	FN	3.6	2N5953	FN	2.5
2N4446	FN	9.1	2N5319	FP	7.3	2N5546	DMN	23.2	2N6656	FVNZ	1.8
2N4447	FN	9.1	2N5339	FN	22.2	2N5547	FN	3.6	2N6657	FVNZ	1.8
2N4448	FN	9.1	2N5358	FN	22.2	2N5547	DMN	23.2	2N6658	FVNZ	1.8
2N4856	FN	7.1	2N5360	FN	22.2	2N5555	FN	2.5	2N6659	FVNZ	1.8
2N4856A	FN	7.1	2N5361	FN	22.2	2N5556	FN	2.5	2N6660	FVNZ	1.8
2N4857	FN	7.1	2N5362	FN	3.6	2N5557	FN	2.5	2N6661	FVNZ	1.8
2N4857A	FN	7.1	2N5363	FN	2.5	2N5558	FN	2.5	3N163	FMP	1.1
2N4858	FN	7.1	2N5364	FN	2.5	2N5562	FN	5.5	3N164	FMP	1.1
2N4858A	FN	7.1	2N5391	FN	88.8	2N5563	FN	5.5	3N165	DFMP	1.0
2N4859	FN	7.1	2N5397	FN	36.1	2N5564	FN	7.1	3N166	DFMP	1.0
2N4859A	FN	7.1	2N5398	FN	36.1	2N5565	FN	7.1	3N172	FMPZ	1.1
2N4860	FN	7.1	2N5432	FN	9.1	2N5566	FN	7.1	3N173	FMPZ	1.1
2N4861	FN	7.1	2N5432	FN	9.0	2N5591	FN	88.8	3N189	DFMPZ	2.0
2N4861A	FN	7.1	2N5433	FN	9.1	2N5592	FN	88.8	3N190	DFMP	2.0
2N4867	FN	39.8	2N5433	FN	9.0	2N5593	FN	88.8	3N191	DFMP	2.0
2N4867A	FN	39.8	2N5434	FN	7.1	2N5594	FN	88.8			

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JEDEC			GEOMETRY			JEDEC			GEOMETRY			JEDEC			GEOMETRY			JEDEC			GEOMETRY		
J108	FN	9.1	SDF505	FN	39.8	SFN250	SVN	415	U304	FP	7.3	U304	FP	7.3	U305	FP	7.3	U306	FP	7.3	U308	FN	71.1
J109	FN	9.1	SDF506	FN	39.8	SFN320	SVN	402	U305	FP	7.3	U308	FN	71.1	U309	FN	71.1	U310	FN	71.1	U311	FN	71.1
J110	FN	9.1	SDF507	FN	39.8	SFN330	SVN	405	U306	FP	7.3	U309	FN	71.1	U310	FN	71.1	U311	FN	71.1	U312	FN	36.1
J111	FN	7.1	SDF508	FN	39.8	SFN350	SVN	415	U308	FN	71.1	U310	FN	71.1	U311	FN	71.1	U312	FN	36.1	U314	FN	36.1
J112	FN	7.1	SDF509	FN	39.8	SFN420	SVN	402	U309	FN	71.1	U311	FN	71.1	U312	FN	36.1	U315	FN	36.1	U316	FN	71.1
J113	FN	7.1	SDF510	FN	39.8	SFN430	SVN	405	U310	FN	71.1	U312	FN	36.1	U313	FN	36.1	U316	FN	71.1	U320	FN	9.1
J174	FP	7.3	SDF511	FN	39.8	SFN450	SVN	415	U311	FN	71.1	U313	FN	36.1	U314	FN	36.1	U320	FN	9.1	U321	FN	9.1
J175	FP	7.3	SDF512	FN	39.8	SFNF061	SVN	101	U312	FN	36.1	U314	FN	36.1	U315	FN	36.1	U321	FN	9.1	U322	FN	9.1
J176	FP	7.3	SDF513	FN	39.8	SFNF065	SVN	105	U313	FN	36.1	U315	FN	36.1	U316	FN	71.1	U322	FN	9.1	U350	FN	71.1
J177	FP	7.3	SDF514	FN	39.8	SFNF101	SVN	101	U314	FN	36.1	U316	FN	71.1	U317	FN	71.1	U350	FN	71.1	U421	DMN	2.4
J201	FN	22.2	SDF515	FN	39.8	SFNF105	SVN	105	U315	FN	36.1	U317	FN	71.1	U318	FN	71.1	U421	DMN	2.4	U422	DMN	2.4
J202	FN	22.2	SDF530	DCN	2.3	SFNF120	SVN	402	U316	FN	71.1	U318	FN	71.1	U319	FN	71.1	U422	DMN	2.4	U423	DMN	2.4
J203	FN	3.6	SDF531	DCN	2.3	SFNF121	SVN	402	U317	FN	71.1	U319	FN	71.1	U320	FN	9.1	U423	DMN	2.4	U424	DMN	2.4
J210	FN	36.1	SDF532	DCN	2.3	SFNF201	SVN	101	U318	FN	71.1	U320	FN	9.1	U321	FN	9.1	U424	DMN	2.4	U425	DMN	2.4
J211	FN	36.1	SDF533	DCN	2.3	SFNF203	SVN	105	U319	FN	71.1	U321	FN	9.1	U322	FN	9.1	U425	DMN	2.4	U426	DMN	2.4
J212	FN	36.1	SDF534	DCN	2.3	SFNF220	SVN	402	U320	FN	9.1	U322	FN	9.1	U323	FN	9.1	U426	DMN	2.4	U430	FN	71.1
J270	FP	7.3	SDF535	DCN	2.3	SFNF320	SVN	402	U321	FN	9.1	U323	FN	9.1	U324	FN	9.1	U430	FN	71.1	U431	FN	71.1
J271	FP	7.3	SDF536	DCN	2.3	SFNF420	SVN	402	U322	FN	9.1	U324	FN	9.1	U325	FN	9.1	U431	FN	71.1	U1897E	FN	7.1
J300	FN	36.1	SDF537	DCN	2.3	SFNO065	SVN	105	U323	FN	9.1	U325	FN	9.1	U326	FN	9.1	U1898E	FN	7.1	U1899E	FN	7.1
J304	FN	2.5	SDF600	DMN	113.3	SFNS061	SVN	101	U324	FN	9.1	U326	FN	9.1	U327	FN	9.1	U1899E	FN	7.1	U1994E	FN	2.5
J305	FN	2.5	SDF601	DMN	113.3	SFNS101	SVN	101	U325	FN	9.1	U327	FN	9.1	U328	FN	9.1	U1994E	FN	2.5	UC155	FN	2.5
J309	FN	71.1	SDF602	DMN	113.3	SFNS201	SVN	101	U326	FN	9.1	U328	FN	9.1	U329	FN	9.1	UC200	FN	5.5	UC201	FN	5.5
J310	FN	71.1	SDF603	DMN	113.3	SU2080	DMN	113.3	U327	FN	9.1	U329	FN	9.1	U330	FN	9.1	UC201	FN	5.5	UC210	FN	5.5
J410	DMN	23.2	SDF604	DMN	113.3	SU2081	DMN	113.3	U328	FN	9.1	U330	FN	9.1	U331	FN	9.1	UC210	FN	5.5	UC220	FN	5.5
J411	DMN	23.2	SDF605	DMN	113.3	SU2365	DMN	113.3	U329	FN	9.1	U331	FN	9.1	U332	FN	9.1	UC220	FN	5.5	UC240	FN	88.8
J412	DMN	23.2	SDF1001	FN	9.0	SU2366	DMN	113.3	U330	FN	9.1	U332	FN	9.1	U333	FN	9.1	UC241	FN	88.8	UC250	FN	7.1
KK4391	FN	7.1	SDF1002	FN	9.0	SU2367	DMN	113.3	U331	FN	9.1	U333	FN	9.1	U334	FN	9.1	UC251	FN	7.1	UC400	FP	7.1
KK4392	FN	7.1	SDF1003	FN	9.0	SU2368	DMN	113.3	U332	FN	9.1	U334	FN	9.1	U335	FN	9.1	UC401	FP	5.3	UC410	FP	5.3
KK4393	FN	7.1	SDF1004	FN	9.0	SU2369	DMN	113.3	U333	FN	9.1	U335	FN	9.1	U336	FN	9.1	UC420	FP	5.3	UC450	FP	7.3
MEM511	FMPZ	1.1	SDF1005	FN	9.0	SVN33AJ	FVN	1.8	U334	FN	9.1	U336	FN	9.1	U337	FN	9.1	UC451	FP	7.1	UC714	FN	2.5
MFE823	FMP	1.1	SDF8200	FMN	35.3	SVN33AK	FVN	1.8	U335	FN	9.1	U337	FN	9.1	U338	FN	9.1	UC734	FN	2.5	UC1700	FMP	1.1
MFE823	FMP	1.1	SDF8201	FMNZ	35.3	SVN66AJ	FVN	1.8	U336	FN	9.1	U338	FN	9.1	U339	FN	9.1	UC1702	FMP	1.1	UC1764	FMP	1.1
MFE2000	FN	2.5	SDF8202	FMN	35.3	SVN66AK	FVN	1.8	U337	FN	9.1	U339	FN	9.1	U340	FN	9.1	UC1764	FMP	1.1			
MFE2001	FN	2.5	SDF8203	FMNZ	35.3	SVN98AJ	FVN	1.8	U338	FN	9.1	U340	FN	9.1	U341	FN	9.1						
MFE2004	FN	7.1	SDF9210	FMN	35.3	SVN98AK	FVN	1.8	U339	FN	9.1	U341	FN	9.1	U342	FN	9.1						
MFE2005	FN	7.1	SDF9211	FMNZ	35.3	TIS58	FN	2.5	U340	FN	9.1	U342	FN	9.1	U343	FN	9.1						
MFE2006	FN	7.1	SDF9212	FMN	35.3	TIS59	FN	2.5	U341	FN	9.1	U343	FN	9.1	U344	FN	9.1						
MFE2133	FN	7.1	SDF9213	FMNZ	35.3	TIS73	FN	7.1	U342	FN	9.1	U344	FN	9.1	U345	FN	9.1						
MPF102	FN	2.5	SDF9214	DMN	35.3	TIS74	FN	7.1	U343	FN	9.1	U345	FN	9.1	U346	FN	9.1						
MPF108	FN	2.5	SDF9215	FMNZ	35.3	TIS75	FN	7.1	U344	FN	9.1	U346	FN	9.1	U347	FN	9.1						
MPF109	FN	3.6	SDF9215	FMNZ	35.3	TIS88A	FN	2.5	U345	FN	9.1	U347	FN	9.1	U348	FN	9.1						
MPF111	FN	2.5	SFN030	SVN	405	U200	FN	7.1	U346	FN	9.1	U348	FN	9.1	U349	FN	9.1						
MPF112	FN	2.5	SFN050	SVN	415	U201	FN	7.1	U347	FN	9.1	U349	FN	9.1	U350	FN	9.1						
P1086E	FP	7.3	SFN105	SVN	105	U202	FN	7.1	U348	FN	9.1	U350	FN	9.1									
P1087E	FP	7.3	SFN120	SVN	402	U231	DMN	23.2	U349	FN	9.1												
SDF500	FN	39.8	SFN121	SVN	402	U232	DMN	23.2	U350	FN	9.1												
SDF501	FN	39.8	SFN130	SVN	405	U233	DMN	23.2															
SDF502	FN	39.8	SFN150	SVN	415	U234	DMN	23.2															
SDF503	FN	39.8	SFN203	SVN	105	U235	DMN	23.2															
SDF504	FN	39.8	SFN220	SVN	402	U257	FN	36.1															
			SFN230	SVN	405	U257	DMN	36.1A															

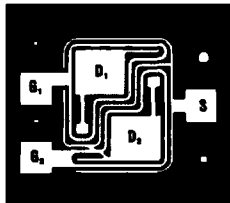
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PRODUCT CATALOG

P-CHANNEL ENHANCEMENT DUAL MOS FET

CHIP NUMBER

DFMP1



.026"
(0.660mm)

.035"
(0.889mm)

Die Size: 26 x 35 (mils)
0.660 x 0.889(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	-35			V	V _{GS} = 0, I _D = 10μA
I _{DSS}		10	400	pA	V _{GS} = 0, V _{DS} = -20V
g _{fs}	1500		3000	μmho	V _{DS} = -15V, I _D = -10mA, f = 1KHz
I _{GSS}		0.1	10	pA	V _{GS} = -40, V _{DS} = 0
DV _{GS}		20	200	mV	V _{DS} = -15V, I _D = -500μA
V _{GS}	-2.0			V	V _{DS} = -15V, I _D = -10μA
C _{iss}		0.4	0.7	pF	V _{DS} = -15V, I _D = -10mA, f = 1MHz
C _{iss}		2.0	3.0	pF	V _{DS} = -15V, I _D = -10mA, f = 1MHz
C _{iss}		2.0	3.0	pF	V _{DS} = -15V, I _D = -10mA, f = 1MHz
̑ _n		50		nV/√Hz	V _{DS} = -15V, I _D = -1mA, f = 1KHz

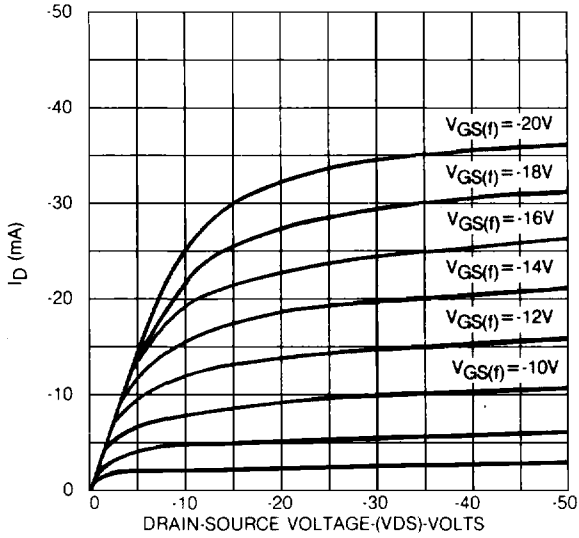
TYPICAL DEVICE TYPES: 3N165, 3N166

PRODUCT CATALOG

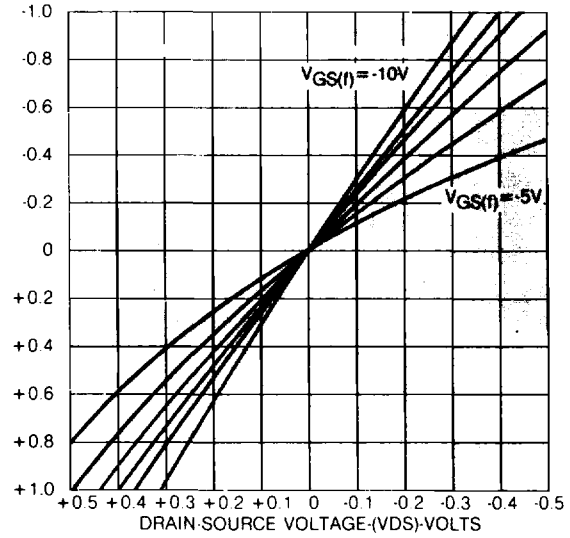
P-CHANNEL ENHANCEMENT DUAL MOS FET

CHIP TYPE DFMP1

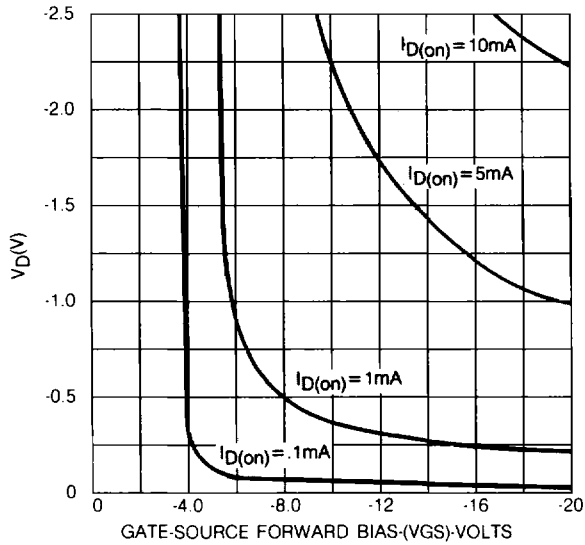
DRAIN CHARACTERISTIC
COMMON-SOURCE



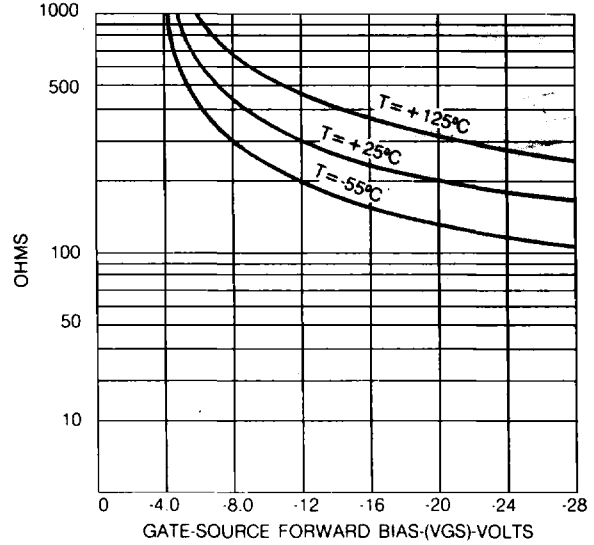
LOW LEVEL
DRAIN CHARACTERISTIC



LOW-LEVEL "ON" DRAIN-SOURCE VOLTAGE
VS GATE-SOURCE BIAS VOLTAGE



STATIC DRAIN-SOURCE ON RESISTANCE
VS GATE-SOURCE BIAS

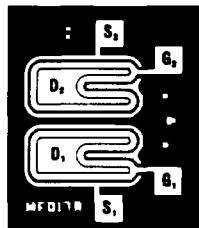


PRODUCT CATALOG

P-CHANNEL ENHANCEMENT DUAL MOS FET

CHIP NUMBER

DFMP2



.035"
(0.889mm)

.029"
(0.737mm)

Die Size: 29 x 35 (mils)
0.737 x 0.889(mm)
5 x 5 (mils)
Pad Size: 0.127 x 0.127(mm)

BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	-30		-60	V	$V_{GS} = 0, I_D = -10\mu A$
I_{DSS}		-10	-500	pA	$V_{DS} = -15V, V_{GS} = 0, V_{GB} = 0$
g_{fs}	1500		4000	μmho	$V_{DS} = -15V, I_D = -10mA, f = 1KHz$
I_{SDS}			350	pA	$V_{GD} = 0, V_{SD} = -15V, V_{DB} = 0$
r_{DS}			300	Ω	$V_{GS} = -20V, I_D = -100\mu A$
$V_{GS(th)}$	-1.5		-5.0	V	$V_{DS} = -15V, I_D = -100\mu A$
C_{rss}		.8	1.5	pF	$V_{DS} = -15V, I_D = -10\mu A, f = 1MHz$
C_{iss}		3.3	4.5	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
$\bar{e}_n$		50		nV/ $\sqrt{Hz}$	$V_{DS} = -15V, I_D = -1mA, f = 1KHz$
$V_{GS(th)} (1-2)$		25	200	mV	$V_{DS} = -15V, I_D = -500\mu A$

TYPICAL DEVICE TYPES: 3N190, 3N191

P-CHANNEL ENHANCEMENT DUAL MOS FET
CHIP TYPE DFMP 2

FIGURE 1

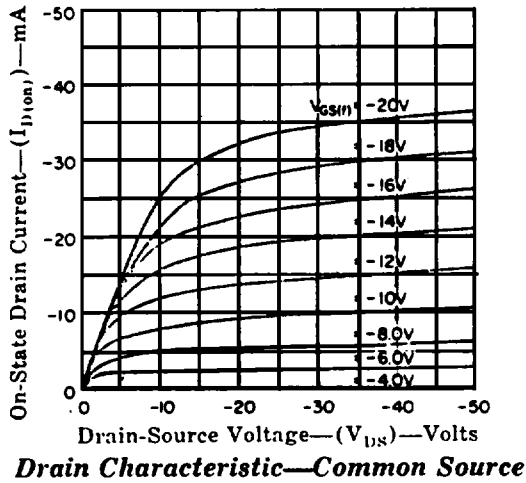


FIGURE 2

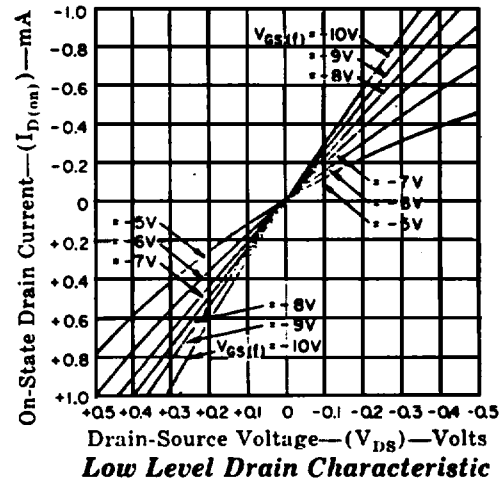


FIGURE 3

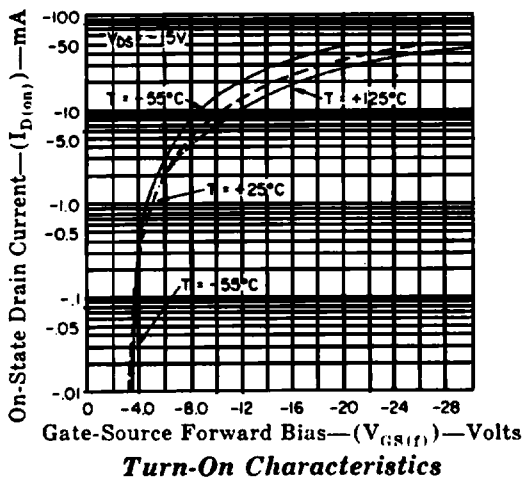


FIGURE 4

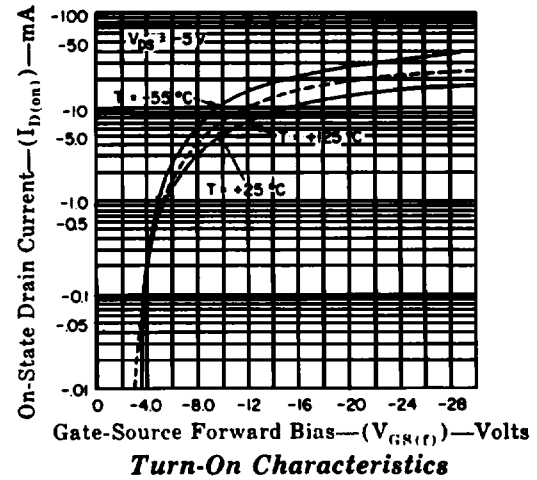


FIGURE 5

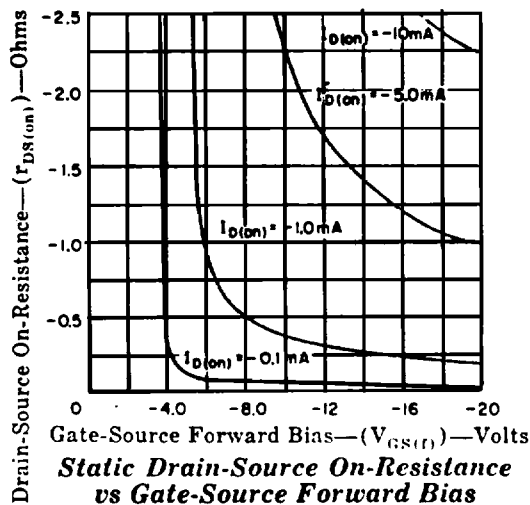
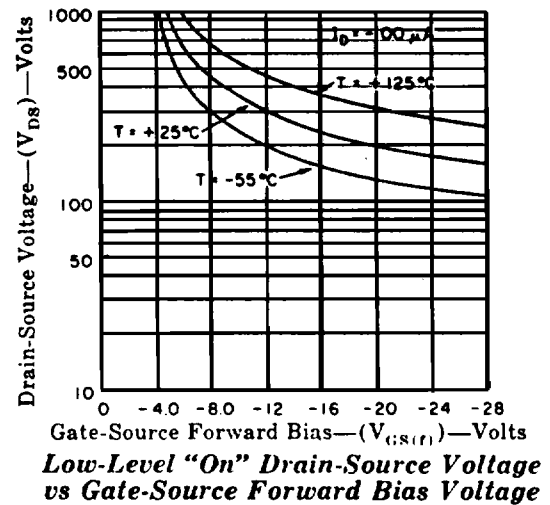


FIGURE 6

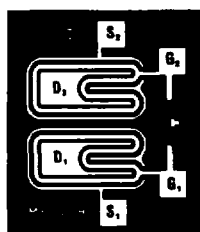


PRODUCT CATALOG

P-CHANNEL ENHANCEMENT DUAL MOS FET

CHIP NUMBER

DFMPZ2



.035"
(0.889mm)

.029"
(0.737mm)

Die Size: 29 x 35 (mils)
0.737 x 0.889(mm)
5 x 5 (mils)
Pad Size: 0.127 x 0.127(mm)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	-30		-60	V	$V_{GS} = 0, I_D = -10\mu A$
I_{DSS}		-40	500	pA	$V_{DS} = -15V, V_{GS} = 0, V_{BS} = 0$
g_{fs}	1500		4000	μmho	$V_{DS} = -15V, I_D = -10mA, f = 1KHz$
I_{SDS}			800	pA	$V_{GS} = 0, V_{SD} = -15V, V_{DB} = 0$
r_{DS}		220	350	Ω	$V_{GS} = -20V, I_D = -100\mu A$
$V_{GS(th)}$	-1.5		-5.0	V	$V_{DS} = -15V, I_D = -10\mu A, V_{BS} = 0$
C_{rss}		1.0	1.5	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
C_{iss}		3.5	4.5	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
$\bar{e}_n$		50		nV/ $\sqrt{Hz}$	$V_{DS} = -15V, I_D = -1mA, f = 1KHz$
$V_{GS(th)} 1-2$		25	100	mV	$V_{DS} = -15V, I_D = -500\mu A$

TYPICAL DEVICE TYPES: 3N188, 3N189

PRODUCT CATALOG

P-CHANNEL ENHANCEMENT DUAL MOS FET

CHIP TYPE DFMPZ 2

FIGURE 1

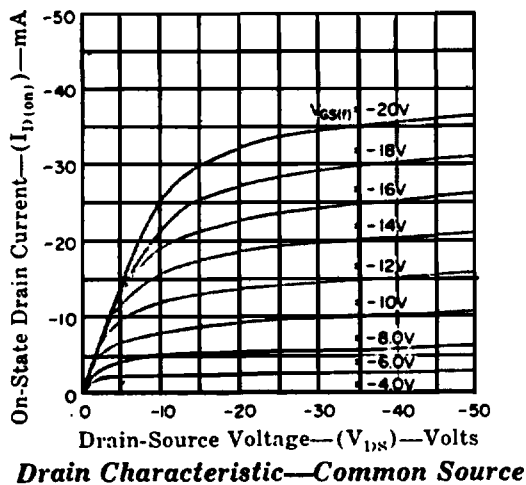


FIGURE 2

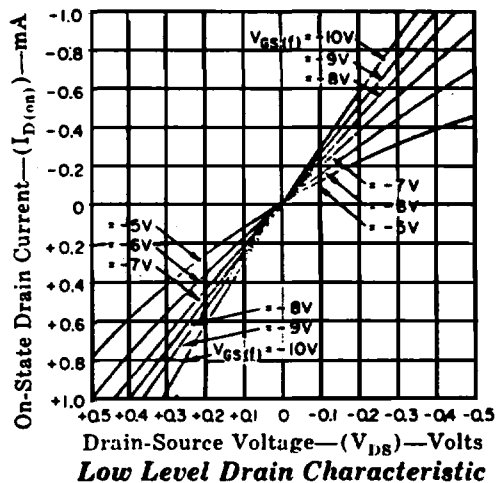


FIGURE 3

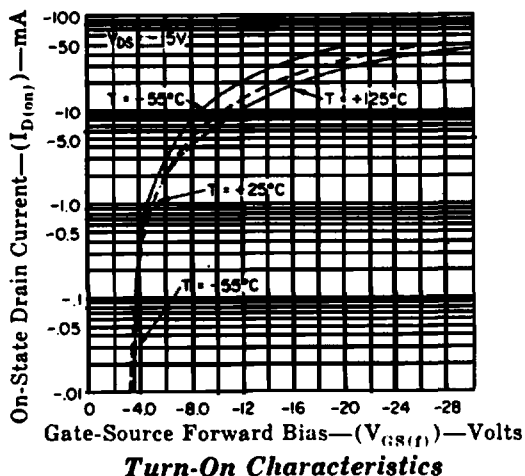


FIGURE 4

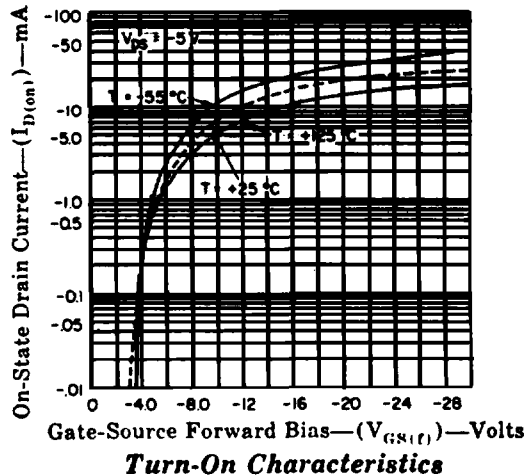


FIGURE 5

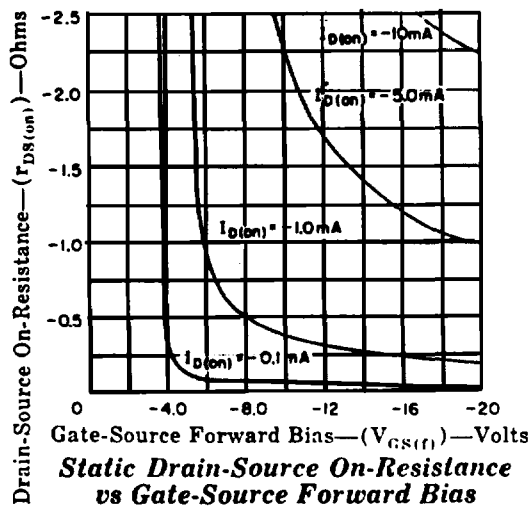
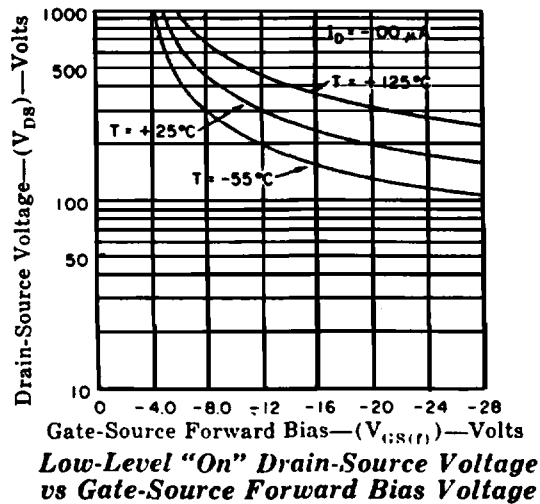


FIGURE 6

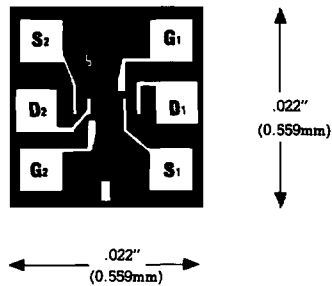


PRODUCT CATALOG

N-CHANNEL DUAL JUNCTION FET

CHIP NUMBER

DMN2.4



Die Size: 22 x 22 (mils)
0.559 x 0.559(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

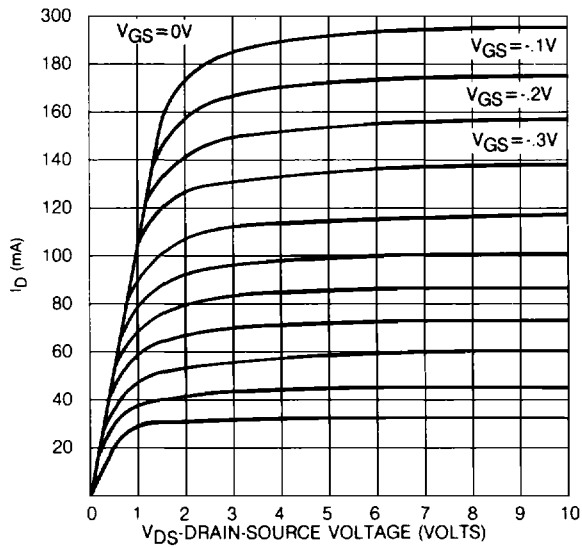
- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

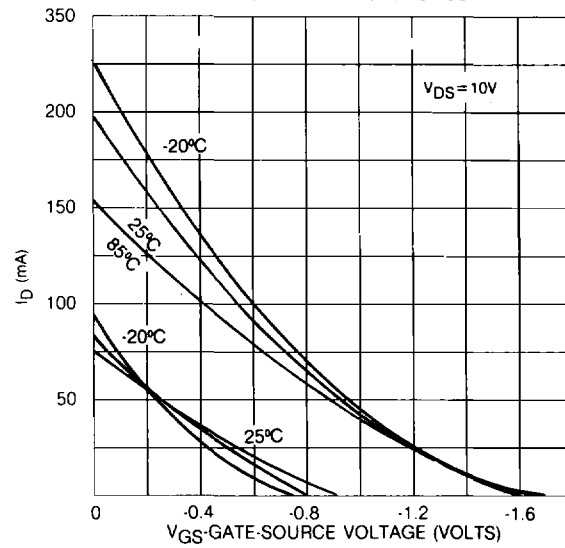
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BV _{GSS}	- 40	-55	- 60	V	V _{DS} = 0, I _G = -1μA
I _{GSS}		0.2	5	pA	V _{DS} = 0, V _{GS} = -20V
I _{DSS}	30		500	μA	V _{DS} = 10V, V _{GS} , = 0
V _p	- 0.6		- 4.5	V	V _{DS} = 10, I _D = 1nA
g _{fs}	70	200	350	μS	V _{DS} = 10V, V _{GS} = 0, F = 1KHz
C _{iss}		2.8	3.5	pF	V _{DS} = 10V, V _{GS} = 0, f = 1MHz
C _{rss}		0.7	1.5	pF	V _{DS} = 10V, V _{GS} = 0, f = 1MHz
Y _{os}		.02	1.0	μS	V _{DS} = 10V, I _D = 30μA, 1KHz

TYPICAL DEVICE TYPES: 2N5902 - 2N5909

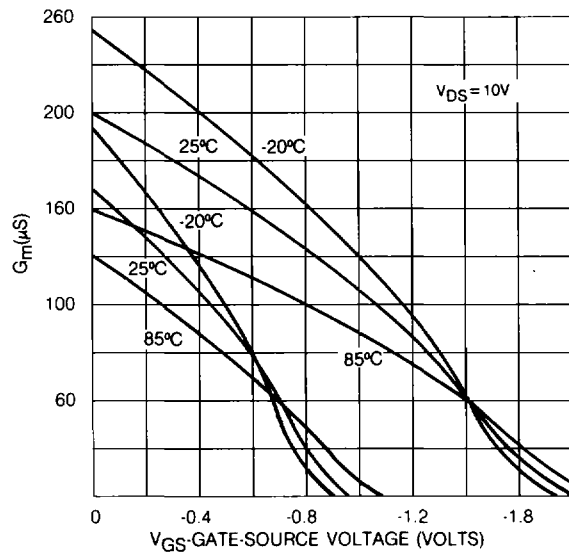
OUTPUT CHARACTERISTICS



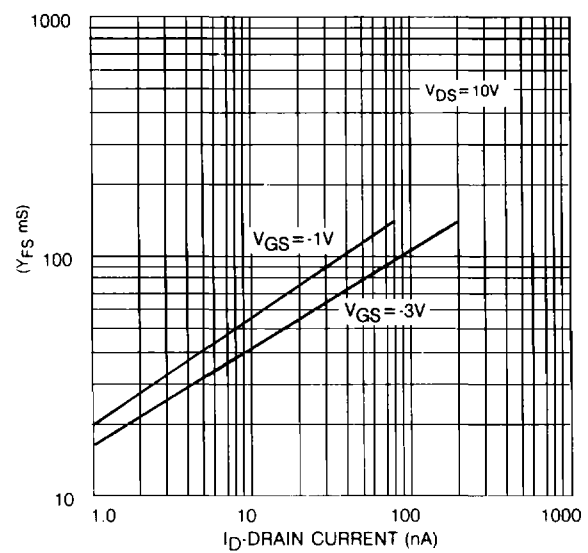
TRANSFER CHARACTERISTICS



TRANSCONDUCTANCE CHARACTERISTICS



FORWARD TRANSCONDUCTANCE

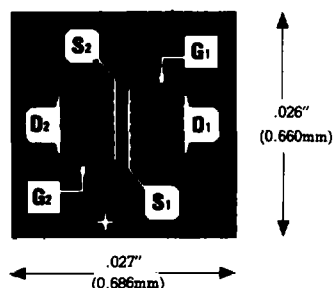


PRODUCT CATALOG

N-CHANNEL DUAL JUNCTION FET

CHIP NUMBER

DMN36.1A



Die Size: .26 x .27 (mils)
 0.660 x 0.686(mm)
 3.5 x 3.5(mils)
 Pad Size: 0.089 x 0.089(mm)

CONTACT METALLIZATION

Top Contact: > 12,000
 Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
$B_{V_{GS}}$	-25	-35		V	$V_{DS} = 0, I_G = 1\mu A$
I_{DSS}	5	20	40	mA	$V_{DS} = 10V, V_{GS} = 0$
V_p	-1		-6	V	$V_{DS} = 10V, I_D = 1nA$
I_{GSS}		10	100	pA	$V_{DS} = 0, V_{GS} = -15V$
g_{fs}	4.5	6.0	10	ms	$V_{DS} = 10V, I_D = 5mA, f = 1MHz$
C_{rss}		1.0	1.5	pF	$V_{DS} = 10V, I_D = 5mA, f = 1MHz$
$\dot{e}_n$		4	20	nV/ $\sqrt{Hz}$	$V_{DS} = 10V, I_D = 5mA, f = 1KHz$

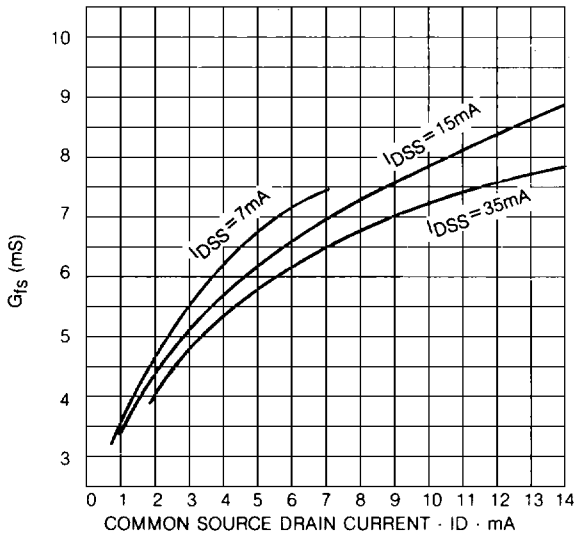
TYPICAL DEVICE TYPES: 2N5911, 2N5912, U257

PRODUCT CATALOG

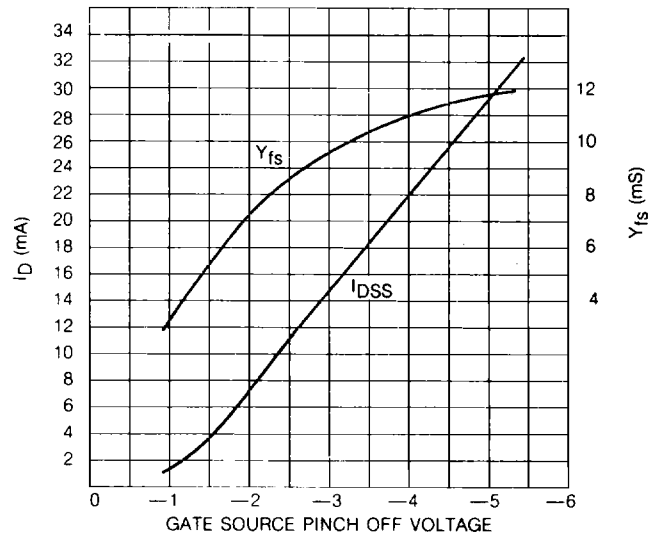
N-CHANNEL DUAL JUNCTION FET

CHIP TYPE DMN36.1A

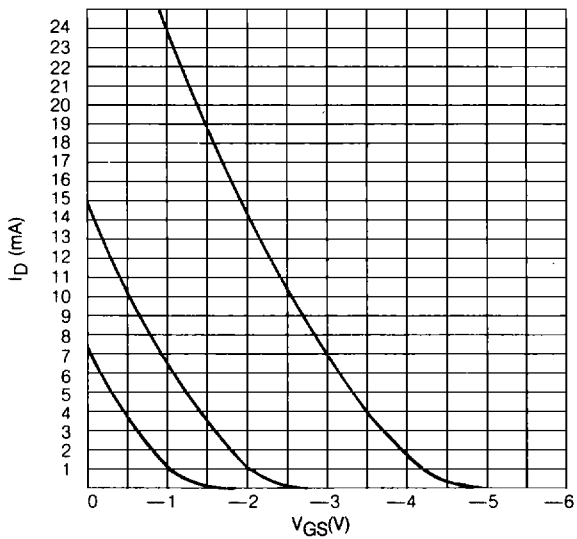
COMMON SOURCE, SHORT CIRCUIT FORWARD TRANSADMITTANCE
VS OPERATING DRAIN CURRENT



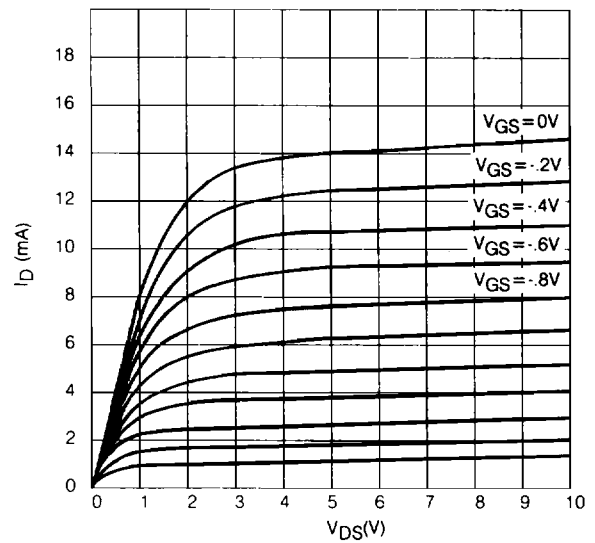
ZERO GATE VOLTAGE
DRAIN CURRENT - I_{DSS} - mA



TRANSFER CHARACTERISTIC



COMMON-SOURCE
DRAIN CHARACTERISTICS

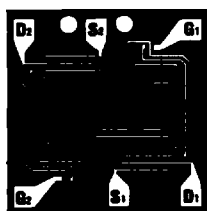


PRODUCT CATALOG

N-CHANNEL DUAL JUNCTION FET

CHIP NUMBER

DMN113.3



.038"
(0.965mm)

.038"
(0.965mm)

Die Size: 38 x 38 (mils)
0.965 x 0.965(mm)
3.5 x 3.5(mils)
Pad Size: 0.089 x 0.089(mm)

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-30	-50	-60	V	$I_D = 1\mu A, V_{DS} = 0$
IGSS		30	200	pA	$V_{DS} = 0, V_{GS} = -20V$
IDSS	1	6	15	mA	$V_{DS} = 15V, V_{GS} = 0$
Vp	-.5	-2	-4	V	$V_{DS} = 15V, I_D = 1nA$
τ_{fs}	1000		8000	μs	$V_{DS} = 15V, V_{GS} = 0, f = 1KHz$
yOS			10	mho	$V_{DS} = 15V, I_{DG} = 700\mu A$
Ciss		16	18	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$
Crss		5	6	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$

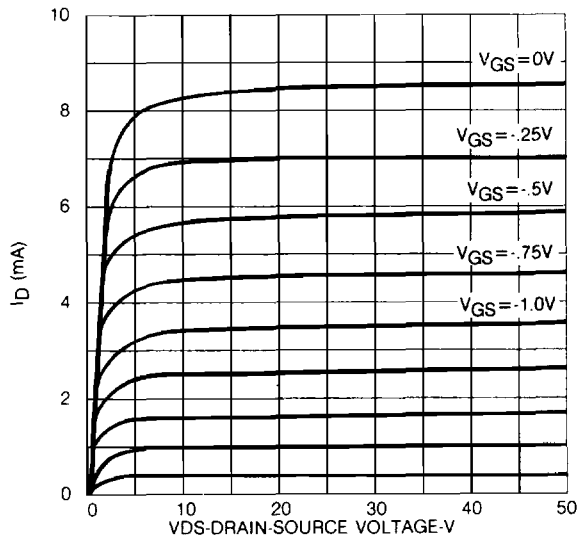
TYPICAL DEVICE TYPES: 2N3921 - 2N3922, 2N4084, 2N4085, SU2365 - SU2369, SU2080, SU2081

PRODUCT CATALOG

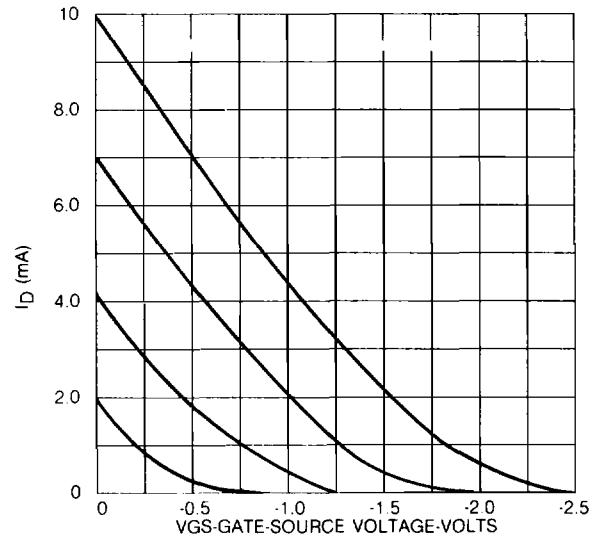
N-CHANNEL DUAL JUNCTION FET

CHIP TYPE DMN113.3

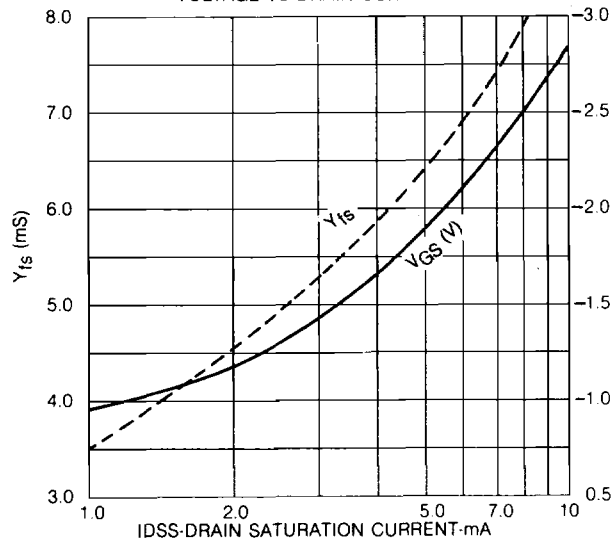
COMMON DRAIN-SOURCE
CHARACTERISTICS



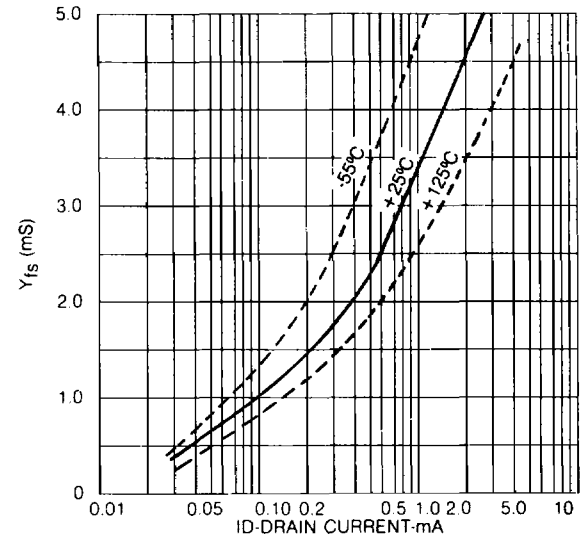
DRAIN CURRENT VS
GATE-SOURCE VOLTAGE



TRANSADMITTANCE/CUT-OFF
VOLTAGE VS DRAIN CURRENT



FORWARD TRANSADMITTANCE
VS. DRAIN CURRENT

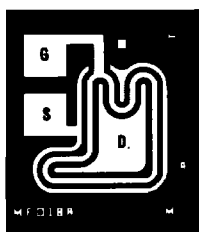


PRODUCT CATALOG

N-CHANNEL MOS FET

CHIP NUMBER

FMN1.1



.023"
(0.581mm)

.021"
(0.533mm)

Die Size: 21 x 23 (mil)
0.530 x 0.534(mil)
Pad Size: 4 x 4 (mil)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

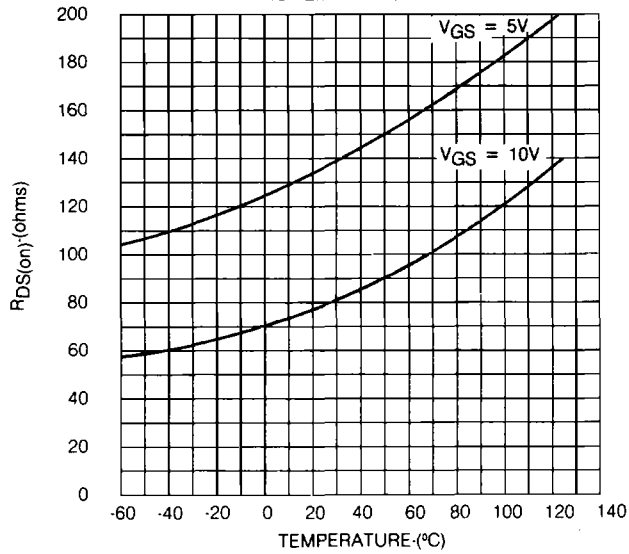
TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	25	30		V	$I_D = +10 \mu A$, $V_{GS} = 0$, $V_{BS} = 0$
IDSS		10	500	pA	$V_{DS} = +15V$, $V_{GS} = 0$, $V_{BS} = 0$
g_{fs}	1000	2500	4000	μmho	$V_{DS} = +15V$, $I_D = 2mA$, $f = 1KHz$
IGSS		0.1	10	pA	$V_{GS} = \pm 40V$, $V_{DS} = 0$
$r_{DS(on)}$		60	195	Ω	$V_{DS} = 20V$, $I_D = 10mA$, $V_{BS} = 0$
$V_{GS(Th)}$	+ .5	+ 1.5	+ 5.0	V	$V_{DS} = +15V$, $I_D = +10mA$, $V_{BS} = 0$
C_{rss}		1.0	1.3	pF	$V_{DS} = +15V$, $I_D = +10mA$, $f = 1MHz$
C_{iss}		4.5	5	pF	$V_{DS} = +15V$, $I_D = 10mA$, $f = 1KHz$

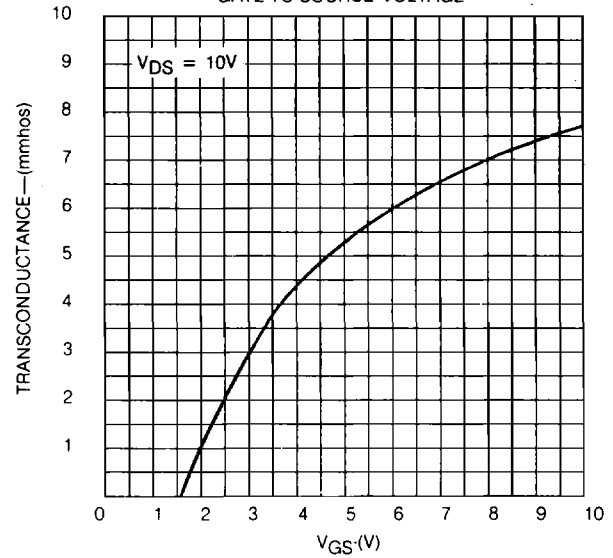
TYPICAL DEVICE TYPES: 3N169, 3N170, 3N171

CHIP TYPE FMN1.1

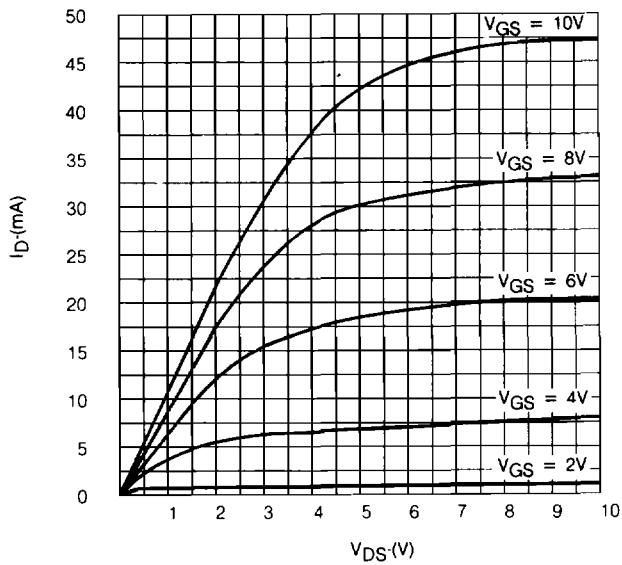
DRAIN-TO-SOURCE RESISTANCE
vs TEMPERATURE



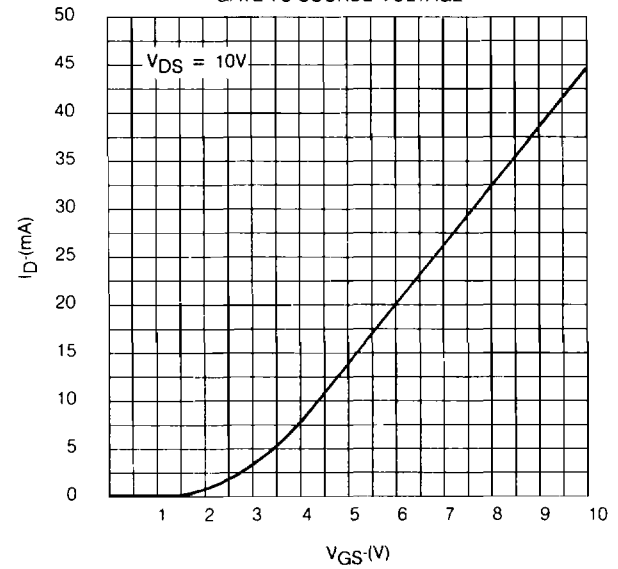
TRANSCONDUCTANCE vs
GATE-TO-SOURCE VOLTAGE



DRAIN CURRENT vs
DRAIN-TO-SOURCE VOLTAGE



DRAIN CURRENT vs
GATE-TO-SOURCE VOLTAGE

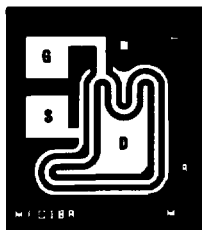


PRODUCT CATALOG

N-CHANNEL ENHANCEMENT MOS FET

CHIP NUMBER

FMN1.2



.023"
(0.584mm)

.021"
(0.533mm)

Die Size: 21 x 23 (mils)
0.533 x 0.584(mm)
Pad Size 4 x 4 (mils)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

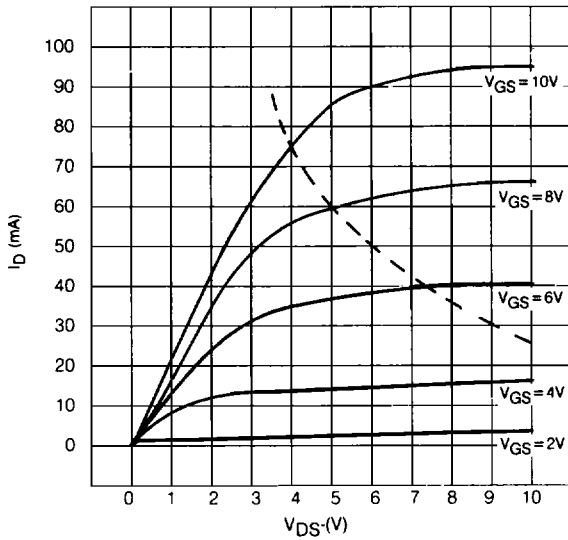
It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

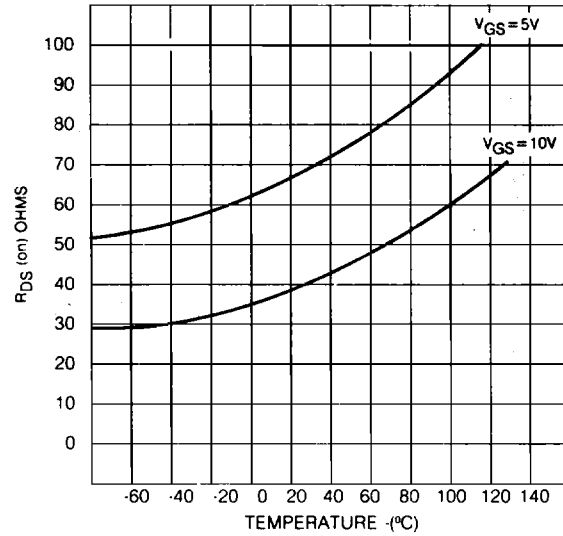
TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	20	33		V	$I_D = 1.0\mu A$, $V_{GS} = 0$, $V_{BS} = 0$
IDSS		.01	10	nA	$V_{DS} = 10V$, $V_{GS} = 0$, $V_{BS} = 0$
IGSS		0.2	5	pA	$V_{GB} = \pm 25V$, $V_{DB} = U_{SB} = 0$
VTH	0.1	1.0	2.5	V	$V_{DS} = V_{GS} = V_{TH}$, $I_D = 1\mu A$
gfs	8.0	10		ms	$V_{DS} = 10V$, $I_D = 20mA$, $f = 1KHz$
RDS		70	100	Ω	$I_{DS} = 0.1mA$, $V_{GS} = 5.0V$
Ciss			4.5	pF	$V_{DS} = 15V$, $I_D = 20mA$, $f = 1MHz$
Coss			1.3	pF	$V_{DS} = 15V$, $I_D = 20mA$, $f = 1MHz$
Crss			1.2	pF	$V_{DS} = 15V$, $I_D = 20mA$, $f = 1MHz$

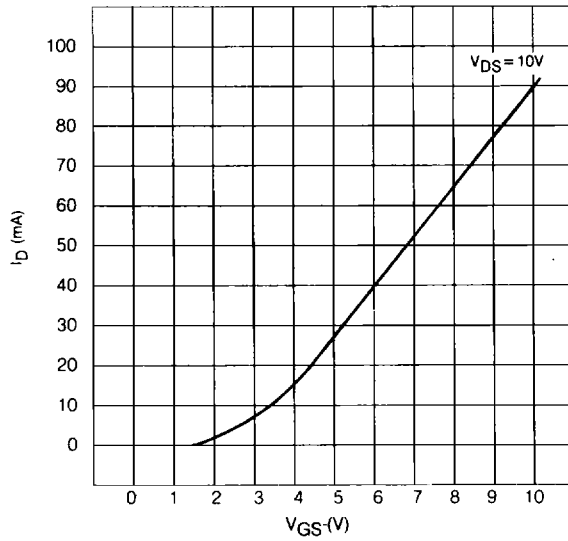
DRAIN CURRENT VS
DRAIN-TO-SOURCE VOLTAGE



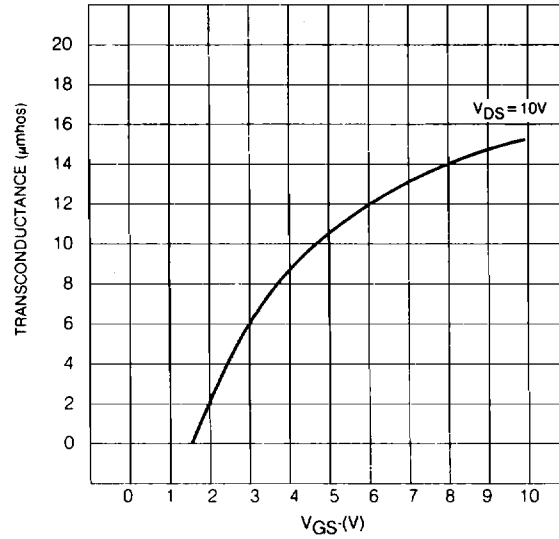
DRAIN-TO-SOURCE RESISTANCE
VS TEMPERATURE



DRAIN CURRENT VS
GATE-TO-SOURCE VOLTAGE



TRANSCONDUCTANCE VS
GATE-TO-SOURCE VOLTAGE

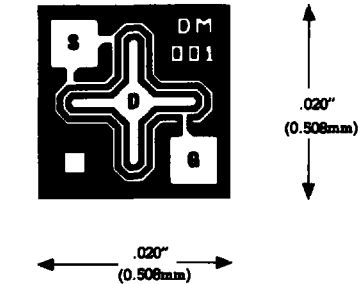


PRODUCT CATALOG

N-CHANNEL ENHANCEMENT DMOS FET

CHIP NUMBER

FMN35.3



CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

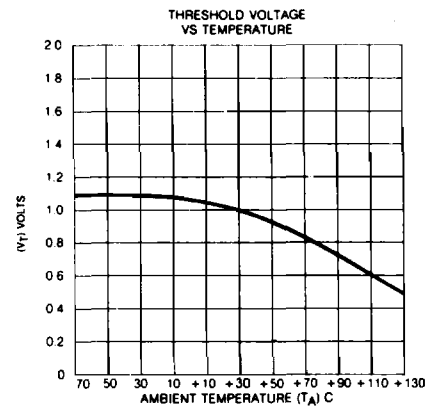
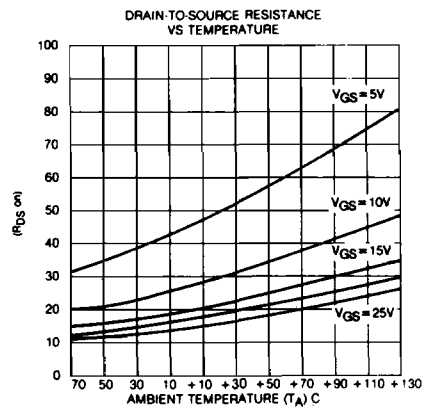
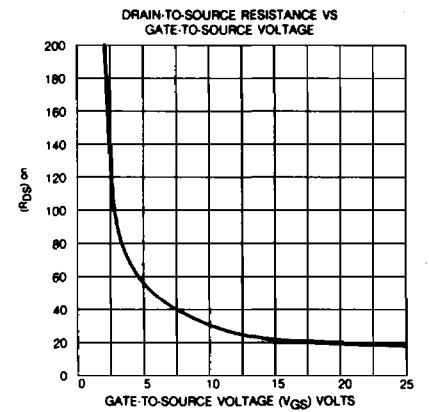
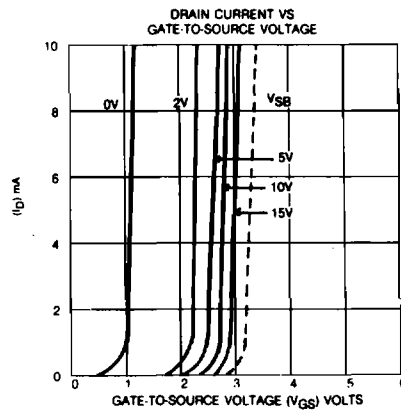
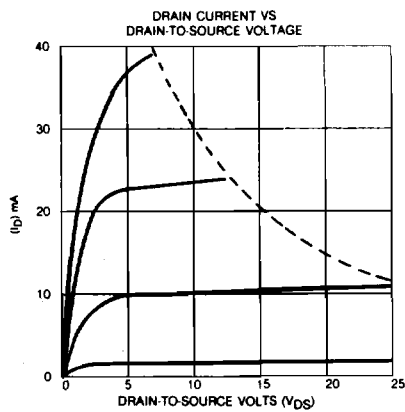
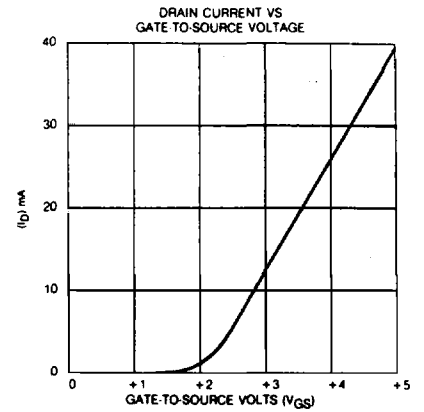
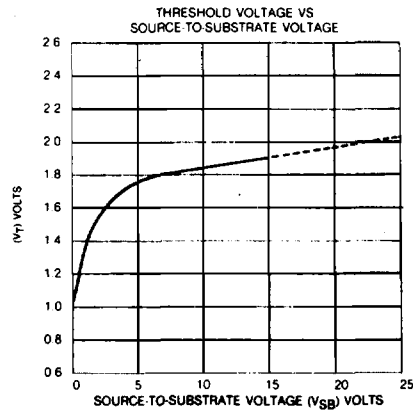
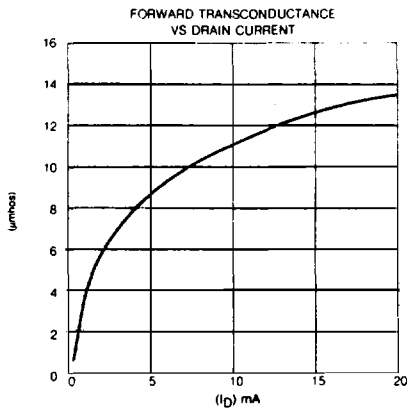
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	20	33		V	$I_D = 1.0\mu A, V_{GS} = 0, V_{BS} = 0$
IDSS		.01	10	nA	$V_{DS} = 10V, V_{GS} = 0, V_{BS} = 0$
IGSS		1	100	pA	$V_{GB} = \pm 25V, V_{DB}, = V_{SB} = 0$
VTH	0.1	1.0	2.5	V	$V_{DS} = V_{GS} = V_{TH}, I_D = 1\mu A$
gfs	10	15		ms	$V_{DS} = 10V, I_D = 20mA, f = 1KHz$
RDS		50	70	Ω	$I_{DS} = 0.1mA, V_{GS} = 5.0V$
Ciss			3.6	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$
Coss			1.3	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$
Cres			0.35	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$

TYPICAL DEVICE TYPES: SDF9210, SDF9212, SDF9214, SDF8200, SDF8202

PRODUCT CATALOG

N-CHANNEL ENHANCEMENT DMOS FET

CHIP TYPE FMN35.3, FMNZ35.3

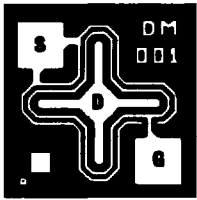


PRODUCT CATALOG

N-CHANNEL ENHANCEMENT DMOS FET

CHIP NUMBER

FMNZ35.3



0.020"
(0.508mm)

0.020"
(0.508mm)

Die Size: 20 x 20 (mils)
0.508 x 0.508(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

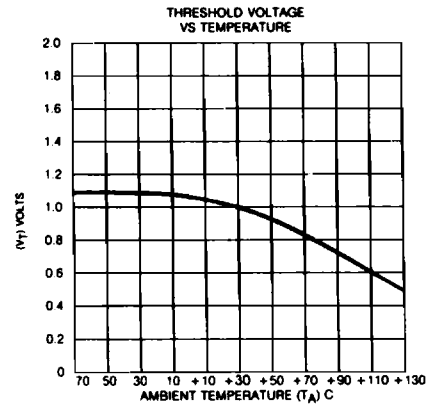
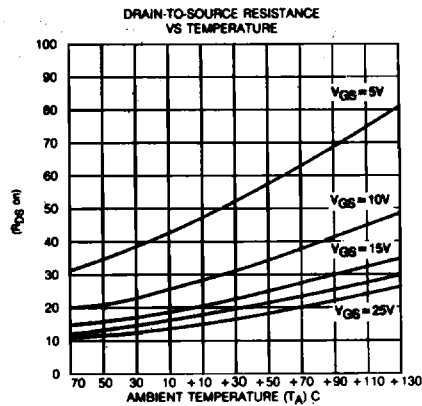
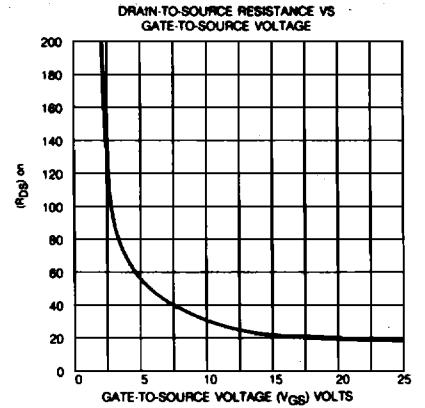
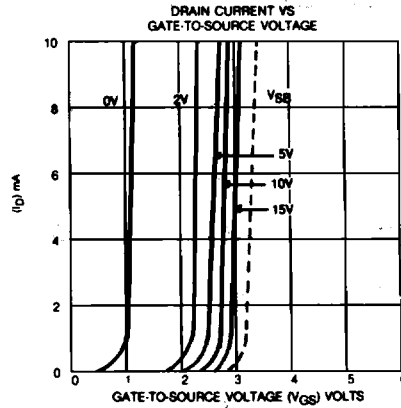
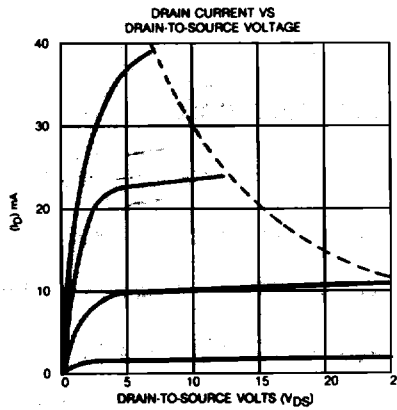
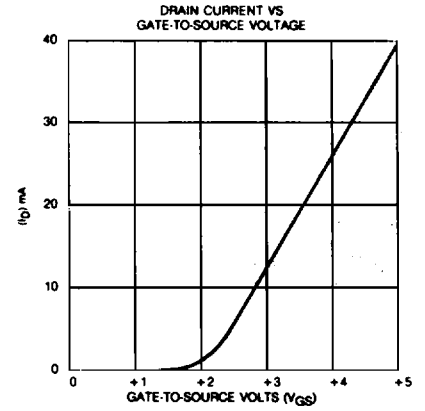
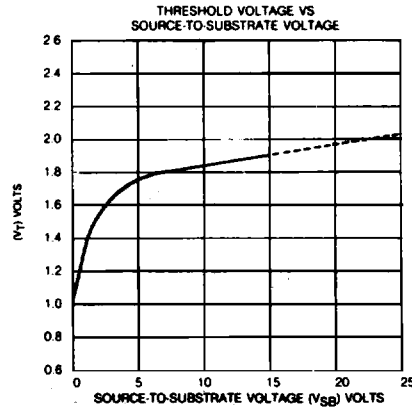
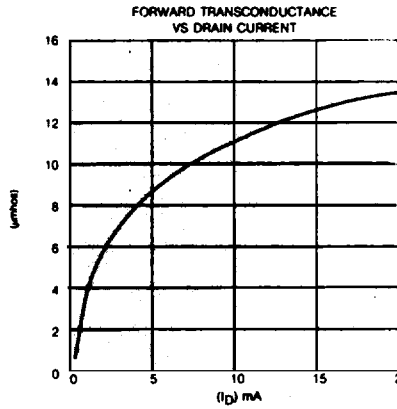
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	20	33		V	$I_D = 1.0\mu A, V_{GS} = 0, V_{BS} = 0$
IDSS		0.01	10	nA	$V_{DS} = 10V, V_{GS} = 0, V_{BS} = 0$
IGSS		0.01	1	nA	$V_{GS} = 10V, V_{BS} = V_{BD} = 0$
VTH	0.1	1.0	2.5	V	$V_{DS} = V_{GS} = V_{TH}, I_D = 1\mu A$
gfs	10	15		mmho	$V_{DS} = 10V, I_D = 20mA, f = 1KHz$
RDS		50	70	Ω	$I_{DS} = 0.1mA, V_{GS} = 5.0V$
Ciss			3.6	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$
Coss			1.3	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$
Crss			0.35	pF	$V_{DS} = 15V, I_D = 20mA, f = 1MHz$

TYPICAL DEVICE TYPES: SDF9210, SDF9212, SDF9214, SDF8200, SDF8202

PRODUCT CATALOG

N-CHANNEL ENHANCEMENT DMOS FET

CHIP TYPE FMNZ35.3, FMN35.3

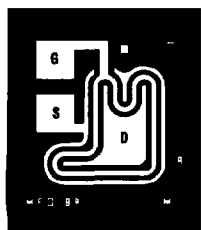


PRODUCT CATALOG

P-CHANNEL ENHANCEMENT MOS FET

CHIP NUMBER

FMP1.1



.023"
(0.584mm)

.021"
(0.533mm)

Die Size: 21 x 23 (mils)
0.533 x 0.584(mm)
Pad Size: 4 x 4 (mils)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

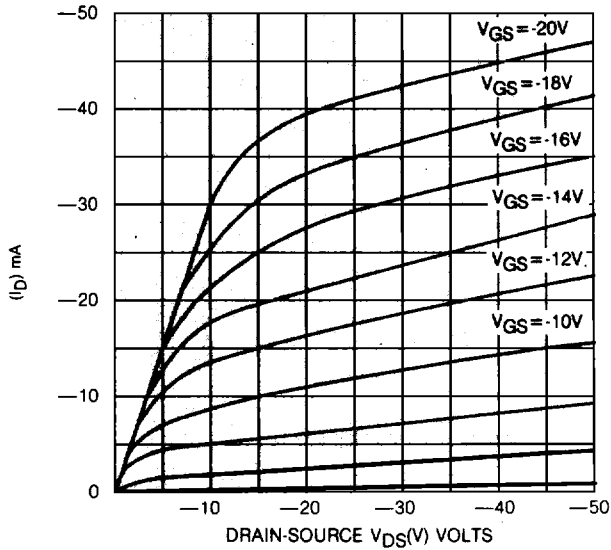
- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

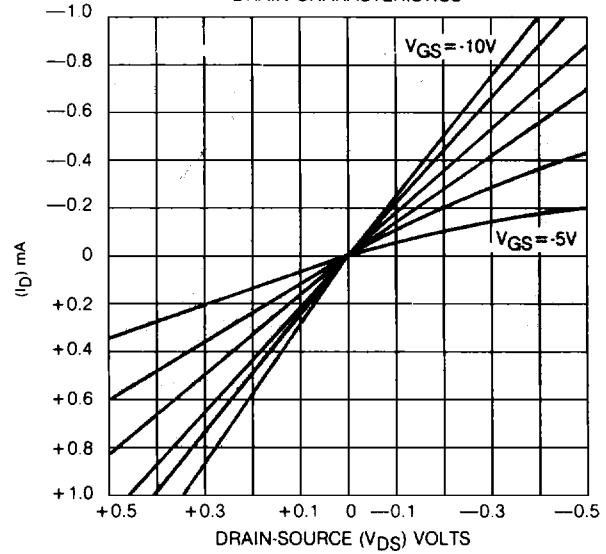
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-35	-40	-60	V	$I_D = 10, \mu A, V_{GS} = 0, V_{BS} = 0$
I_{DSS}		20	500	pA	$V_{DS} = -15V, V_{GS} = 0, V_{BS} = 0$
g_{fs}	1000	2500	4000	μmho	$V_{DS} = -15V, I_D = 10mA, f = 1KHz$
$I_{D(on)}$	-3.0		-30	mA	$V_{DS} = -15V, V_{GS} = -10V, V_{BS} = 0$
r_{DS}		200	350	Ω	$V_{GS} = -20V, I_D = -100\mu A, V_{BS} = 0$
$V_{GS(th)}$	-2.0		-5.0	V	$V_{DS} = -15V, I_D = -10\mu A, V_{BS} = 0$
C_{rss}			1.0	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
C_{iss}			3.5	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
$\bar{e}_n$		50		nV/ $\sqrt{Hz}$	$V_{DS} = -15V, I_D = -10mA, f = 1KHz$

TYPICAL DEVICE TYPES: 2N4065, 3N163, 3N164, UC1700, UC1702

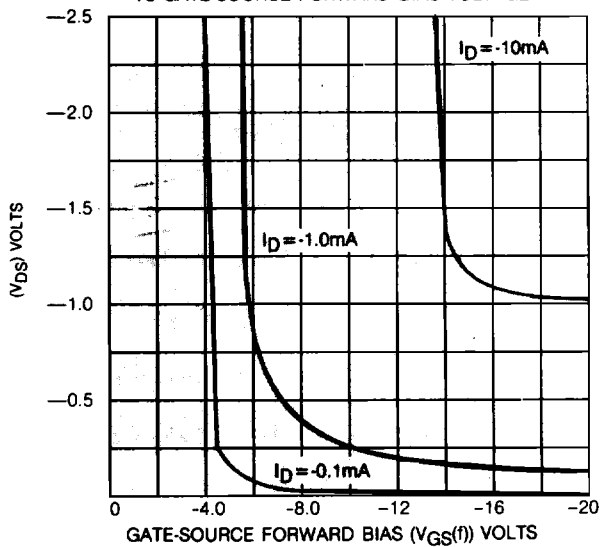
DRAIN CHARACTERISTICS—
COMMON-SOURCE



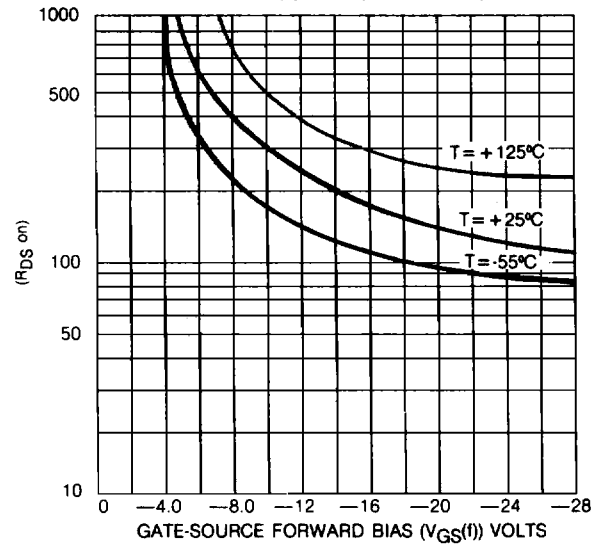
LOW LEVEL
DRAIN CHARACTERISTICS



LOW-LEVEL "ON" DRAIN SOURCE VOLTAGE
VS GATE-SOURCE FORWARD BIAS VOLTAGE



STATIC DRAIN-SOURCE ON RESISTANCE
VS GATE-SOURCE FORWARD BIAS

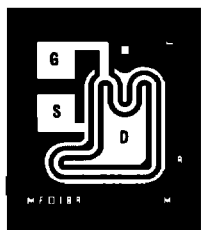


PRODUCT CATALOG

P-CHANNEL ENHANCEMENT MOS FET

CHIP NUMBER

FMPZ1.1



.023"
(0.584mm)

.021"
(0.533mm)

Die Size: 21 x 23 (mils)
0.533 x 0.584(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)
BODY-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVDSS	-35	-40	-60	V	$I_D = -10, \mu A, V_{GS} = 0, V_{BS} = 0$
I_{DSS}		20	500	pA	$V_{DS} = -15V, V_{GS} = 0, V_{BS} = 0$
g_{fs}	1000	2500	4000	μmho	$V_{DS} = -15V, I_D = -10mA, f = 1KHz$
$I_{D(on)}$	-3.0		-30	mA	$V_{DS} = -15V, V_{GS} = -10V, V_{BS} = 0$
r_{DS}		200	350	Ω	$V_{GS} = -20V, I_D = -100\mu A, V_{BS} = 0$
$V_{GS(th)}$	-2.0		-5.0	V	$V_{DS} = -15V, I_D = -10\mu A, V_{BS} = 0$
C_{rss}			1.0	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
C_{iss}			3.5	pF	$V_{DS} = -15V, I_D = -10mA, f = 1MHz$
$\bar{e}_n$		50		nV/ $\sqrt{Hz}$	$V_{DS} = -15V, I_D = -10mA, f = 1KHz$

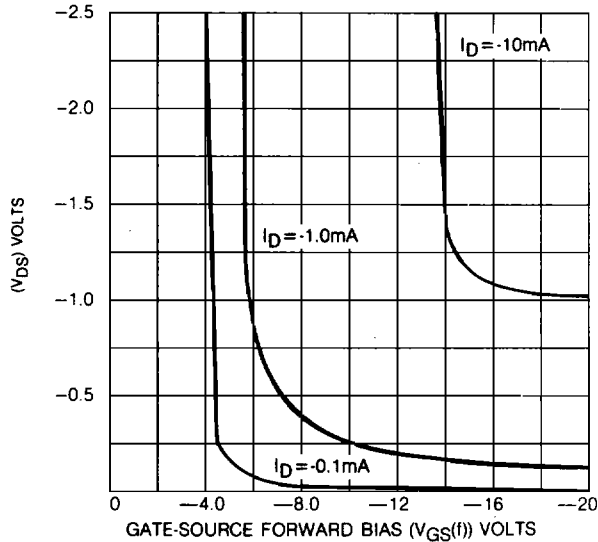
TYPICAL DEVICE TYPES: 3N172, 3N173

PRODUCT CATALOG

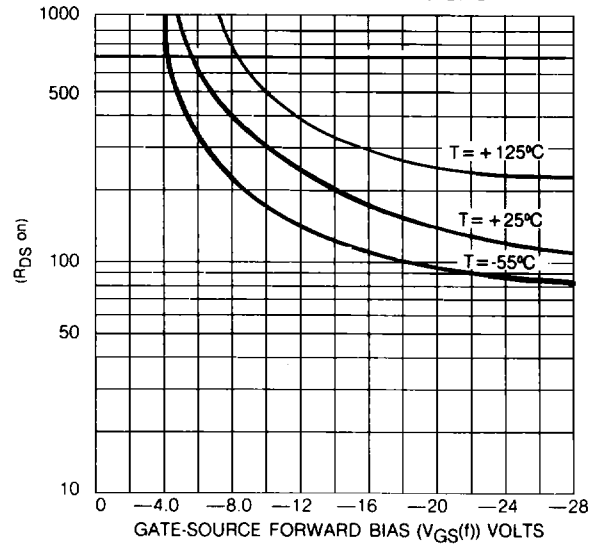
P-CHANNEL ENHANCEMENT MOS FET

CHIP TYPE FMPZ1.1

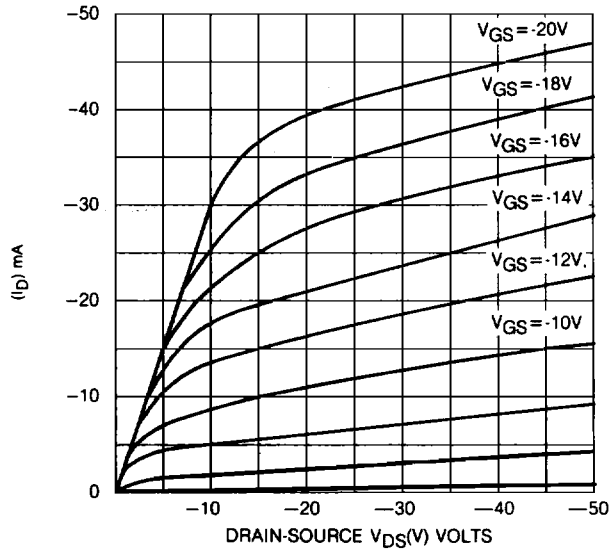
LOW-LEVEL "ON" DRAIN SOURCE VOLTAGE
VS GATE-SOURCE FORWARD BIAS VOLTAGE



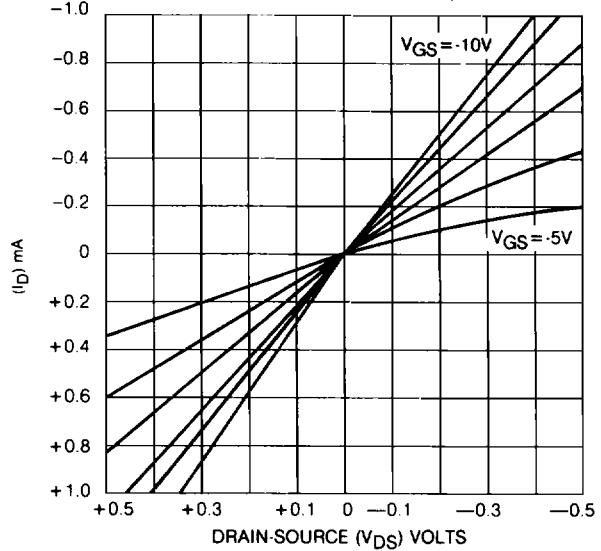
STATIC DRAIN-SOURCE ON RESISTANCE
VS GATE-SOURCE FORWARD BIAS



DRAIN CHARACTERISTICS—
COMMON-SOURCE



LOW LEVEL
DRAIN CHARACTERISTICS

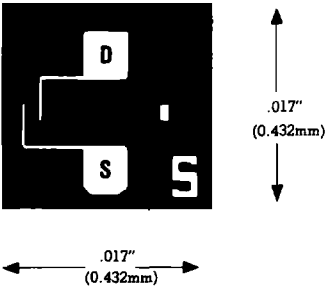


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN2.2



Die Size: .17 x .17 (mils)
0.432 x 0.432(mm)
3.5 x 4 (mils)
Pad Size: 0.089 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
A Aluminum

Backside Contact: 3,000 A Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-30	-60	-80	V	$V_{DS} = 0V, I_G = 1\mu A$
IDSS	0.02	0.25	1.0	mA	$V_{DS} = 10V, V_{GS} = 0$
gfs	80	250	350	μmho	$V_{DS} = 10V, V_{GS} = 0$
IGSS		-0.3	-10	pA	$V_{GS} = -20V, V_{DS} = 0$
VGS(off)	-0.5	-2.0	-6.0	V	$V_{DS} = 10V, I_D = 1nA$
Crss	.7	0.8	1.0	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$
Ciss	1.7	2.0	2.5	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$
$\bar{a}_n$		45	150	nV/ $\sqrt{Hz}$	$V_{DG} = 10V, I_D = 50\mu A, f = 100Hz$

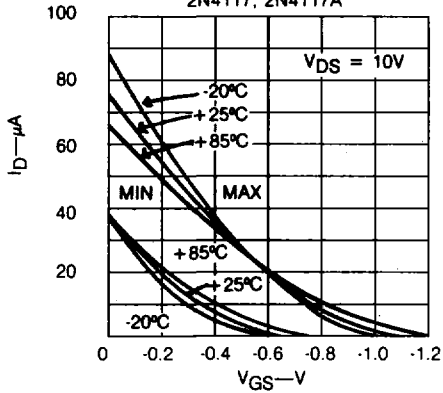
TYPICAL DEVICE TYPES: 2N4117A, 2N4119A, 2N3452, 2N5902-2N5909

PRODUCT CATALOG

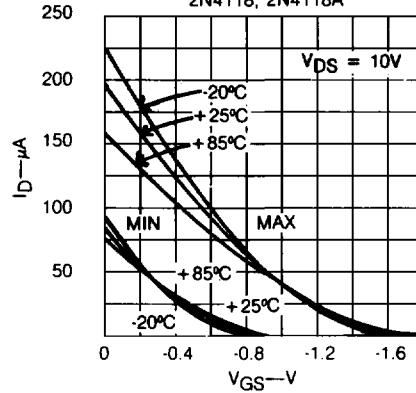
N-CHANNEL JUNCTION FET

CHIP TYPE FN2.2

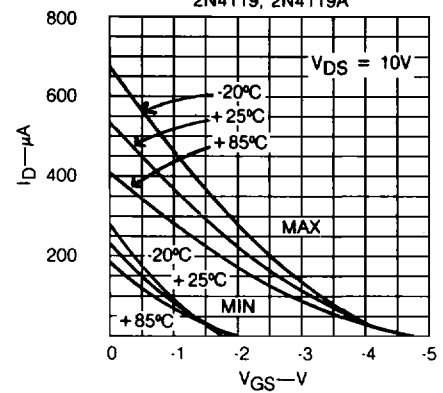
TRANSFER CHARACTERISTICS
2N4117, 2N4117A



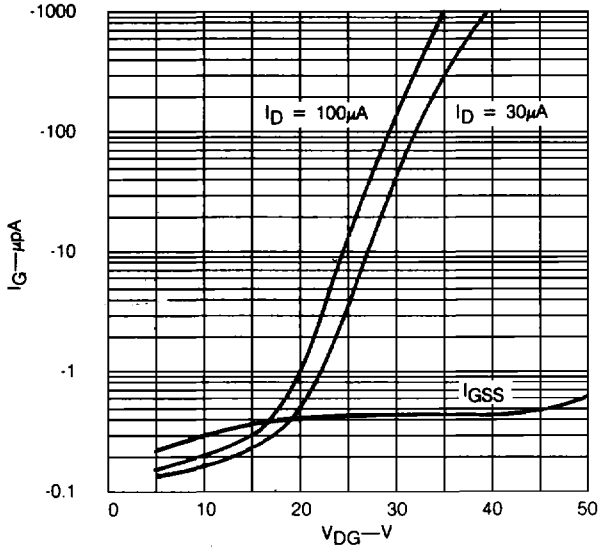
TRANSFER CHARACTERISTICS
2N4118, 2N4118A



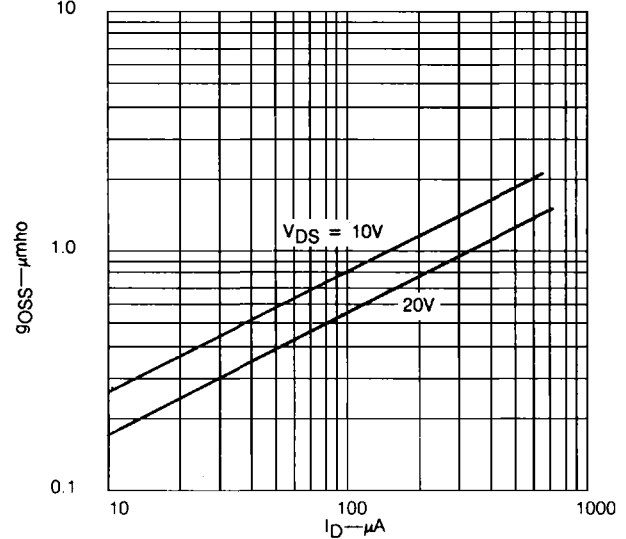
TRANSFER CHARACTERISTICS
2N4119, 2N4119A



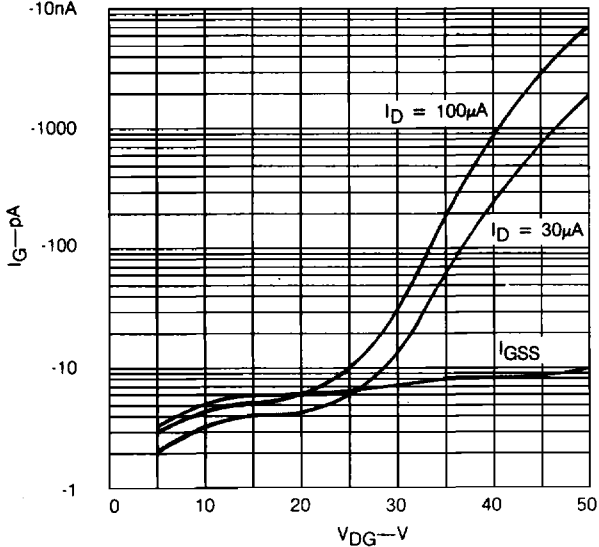
GATE CURRENT
2N4117A-2N4119A



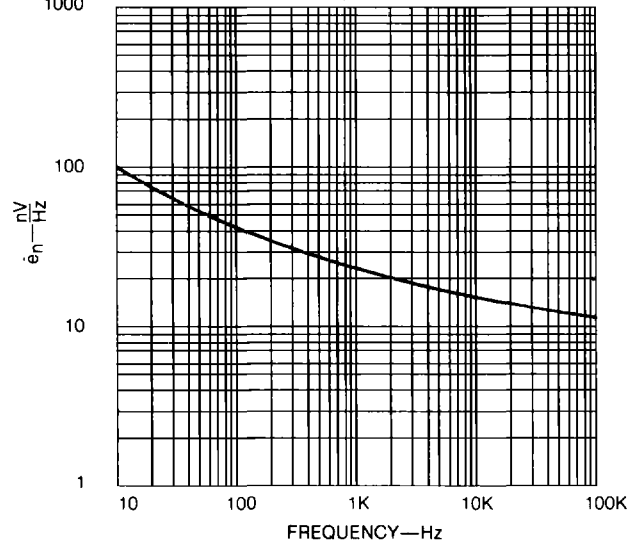
OUTPUT CONDUCTANCE
2N4771-2N4119, 2N4119A-2N4119A



GATE CURRENT
2N4117-2N4119

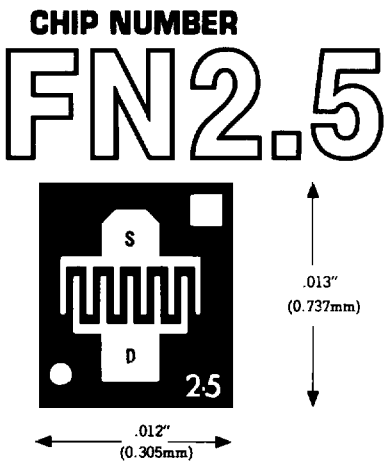


SHORT CIRCUIT EQUIVALENT INPUT NOISE VOLTAGE
2N4117-2N4119, 2N4119A-2N4119A



PRODUCT CATALOG

N-CHANNEL JUNCTION FET



Die Size: 12 x 13 (mils)
0.305 x .0330(mm)
3 x 3 (mils)
Pad Size: 0.076 x 0.076(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
A Aluminum

Backside Contact: 3,000 A Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-25	-35	-50	V	$V_{DS} = 0V, I_G = 1\mu A$
IDSS	1.0	10	30	mA	$V_{DS} = 15V, V_{GS} = 0$
gfs	3.0	5.5	7.5	mmho	$V_{DS} = 15V, V_{GS} = 0$
IGSS		-5.0	-100	pA	$V_{GS} = -20V, V_{DS} = 0$
rDS	100	170	500	Ω	$V_{DS} = 100mV, V_{GS} = 0$
VGS(off)	-0.8	-3.0	8.0	V	$V_{DS} = 15V, I_D = 1nA$
Crss	0.6	0.7	0.9	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$
Ciss	3.0	3.5	4.0	pF	$V_{DS} = 15V, V_{GS} = 0, f = 1MHz$
en		15		nV/ $\sqrt{Hz}$	$V_{DG} = 15V, I_D = 5\mu A, f = 100Hz$

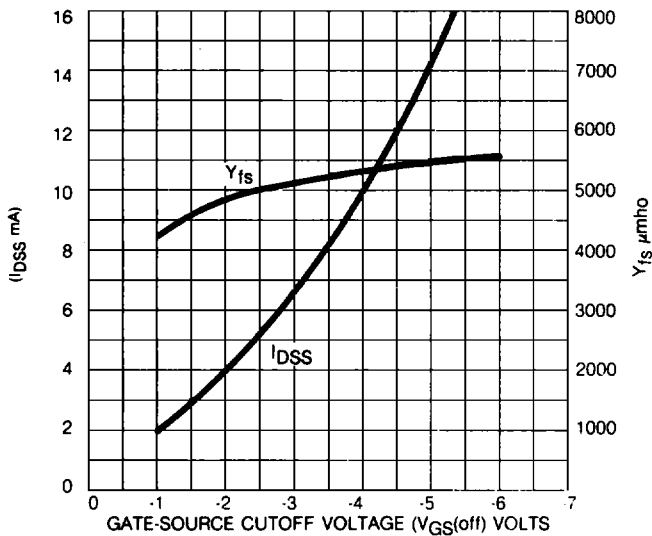
TYPICAL DEVICE TYPES: 2N4116, 2N3823, 2N3452, 2N5104, 2N5105, UC734, 2N5485

PRODUCT CATALOG

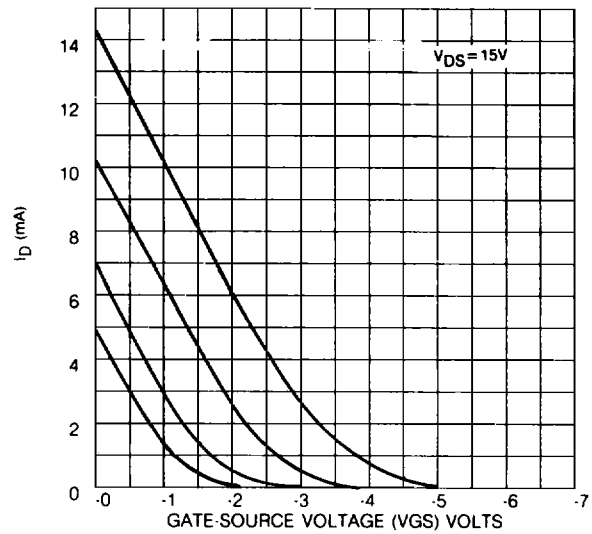
N-CHANNEL JUNCTION FET

CHIP TYPE FN2.5

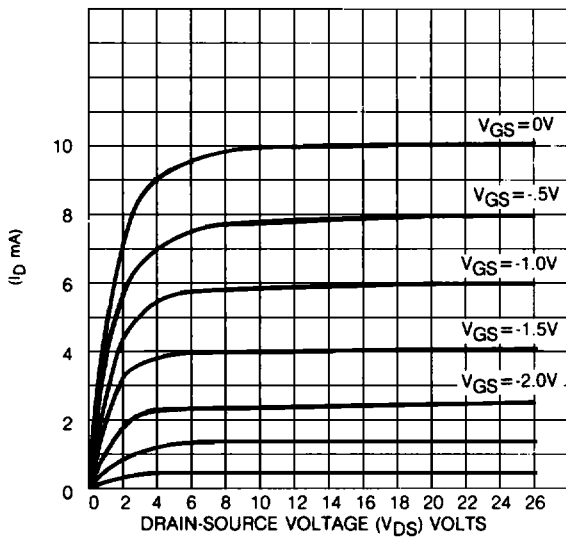
TRANSFER ADMITTANCE VS
GATE-SOURCE CUTOFF VOLTAGE



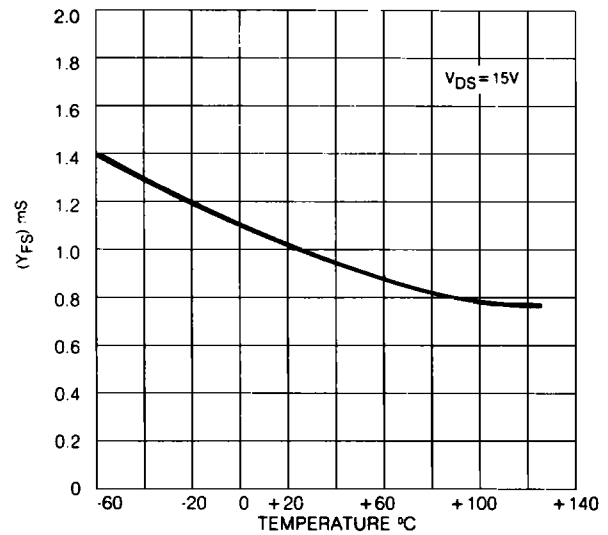
TRANSFER CHARACTERISTICS



OUTPUT CHARACTERISTICS



NORMALIZED FORWARD TRANSFER ADMITTANCE
VS TEMPERATURE

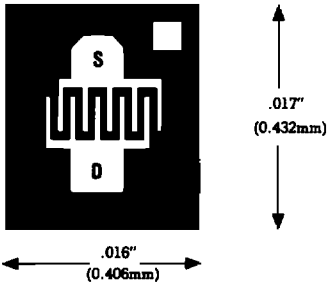


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN3.6



Die Size: .16 x .17 (mils)
0.406 x 0.432(mm)
3 x 3 (mils)
Pad Size: 0.076 x 0.076(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-30	-50	-70	V	VDS = 0, IG = 1μA
IDSS	0.5	8.0	20	mA	VDS = 15V, VGS = 0
gfs	1.5	4.0	6.0	mmho	VDS = 15V, VGS, = 0
IGSS		25	100	pA	VGS = -30V, VDS = 0
rDS	150	200	600	Ω	VDS = 100mV, VGS = 0
VGS(off)	-1.0	-3.0	8.0	V	VDS = 15V, ID = 1nA
Crss	1.2	2.0	3.0	pF	VDS = 15V, VGS = 0, f = 1MHz
Ciss		4.5	6.0	pF	VDS = 15V, VGS = 0, f = 1MHz

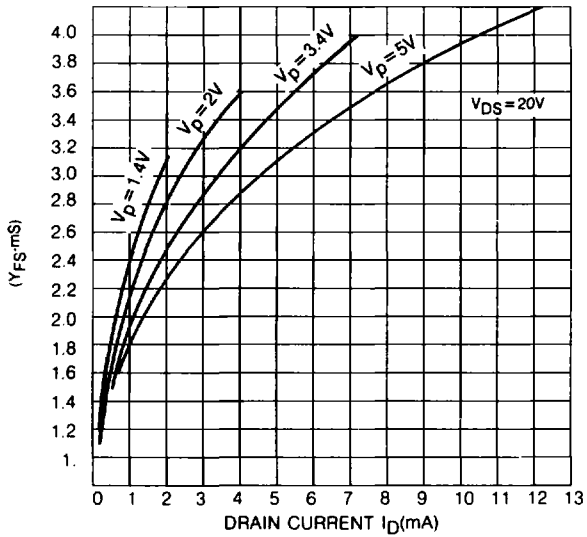
TYPICAL DEVICE TYPES: 2N3821 - 2N3824, 2N3921 - 2N3922, 2N5545 - 2N5547

PRODUCT CATALOG

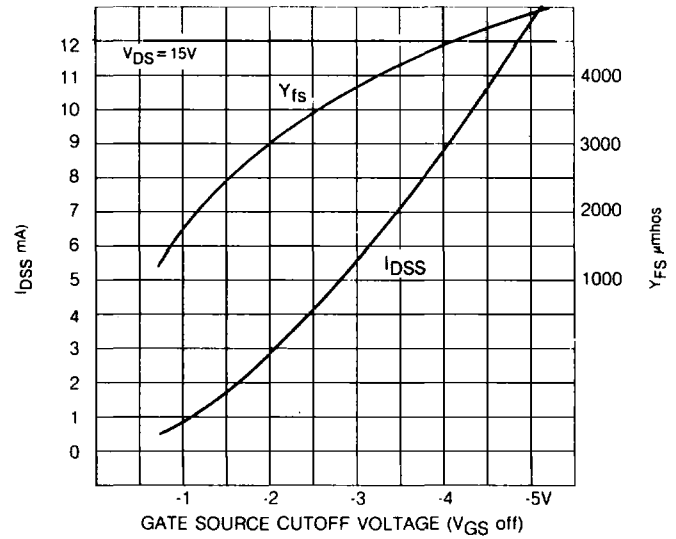
N-CHANNEL JUNCTION FET

CHIP TYPE FN3.6

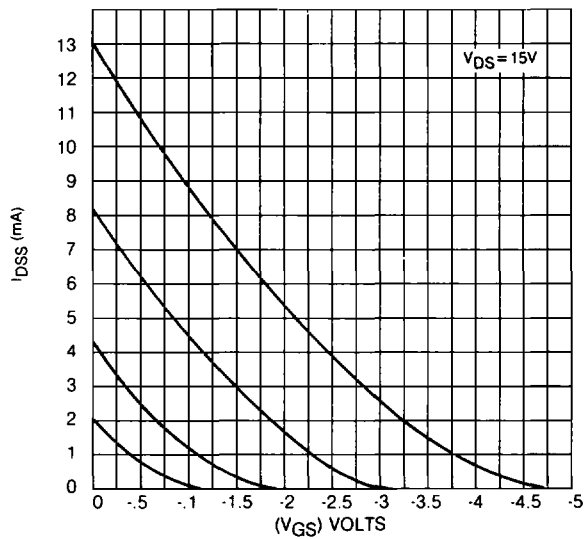
FORWARD TRANSADMITTANCE
VS. OPERATING DRAIN CURRENT



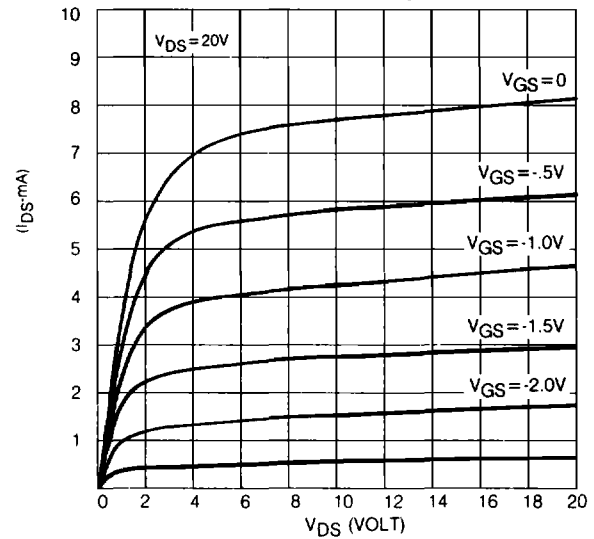
FORWARD TRANSADMITTANCE VS



TRANSFER CHARACTERISTICS



OUTPUT CHARACTERISTICS

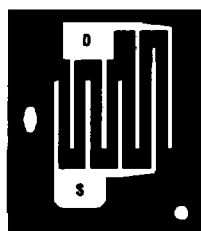


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN5.5



.020"
(0.508mm)

.015"
(0.381mm)

Die Size: 15 x 20 (mils)
0.381 x 0.508(mm)
3 x 4 (mils)
Pad Size: 0.076 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BV _{GSS}	-40	-60	-80	V	V _{DS} = 0, I _G = 1μA
I _{DSS}	1.0	12	30	mA	V _{DS} = 20V, V _{GS} = 0
g _{fs}	1.0	4.0	6.0	mmho	V _{DS} = 20V, V _{GS} = 0
I _{GSS}		-10	-100	pA	V _{GS} = -30V, V _{DS} = 0
r _{DS}	120	300	1000	Ω	V _{DS} = 100mV, V _{GS} = 0
V _{GS(off)}	-0.5	-3.0	-8.0	V	V _{DS} = 20V, I _D = 1nA
C _{rss}		1.8	3.0	pF	V _{DS} = 15V, I _D = 2mA, f = 1MHz
C _{iss}		6	8	pF	V _{DS} = 15V, I _D = 2mA, f = 1MHz
ē _n		25	50	nV/√Hz	V _{DS} = 15V, I _D = 2mA, f = 10Hz

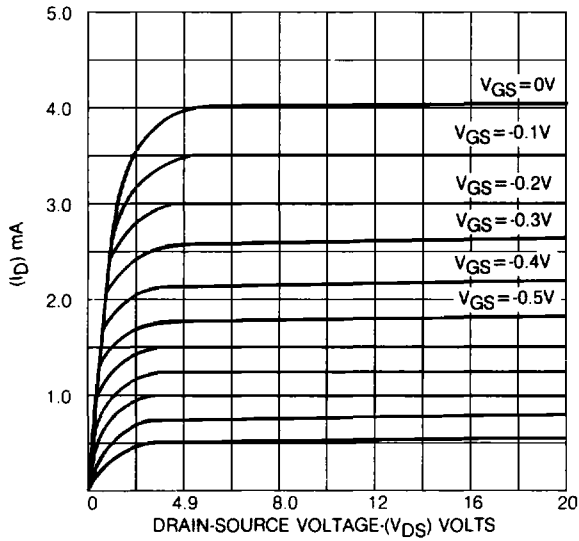
TYPICAL DEVICE TYPES: 2N5561 - 2N5563, UC210, UC220, 2N4221, 2N4222

PRODUCT CATALOG

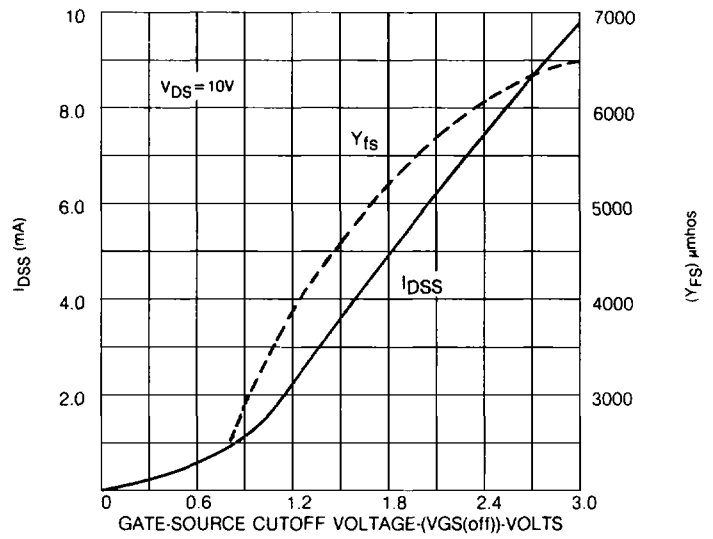
N-CHANNEL JUNCTION FET

CHIP TYPE FN5.5

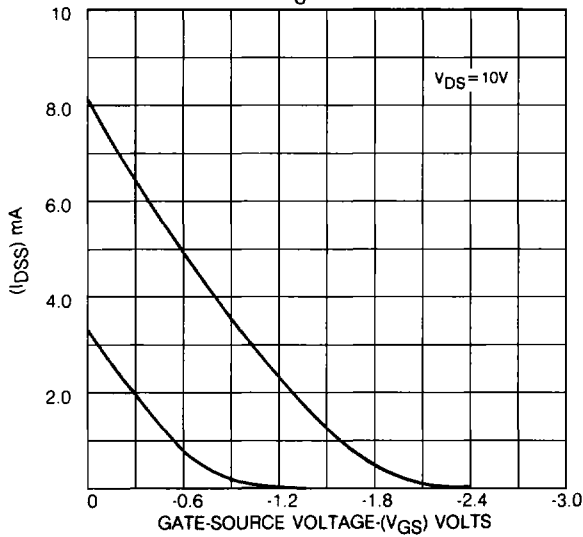
OUTPUT CHARACTERISTIC



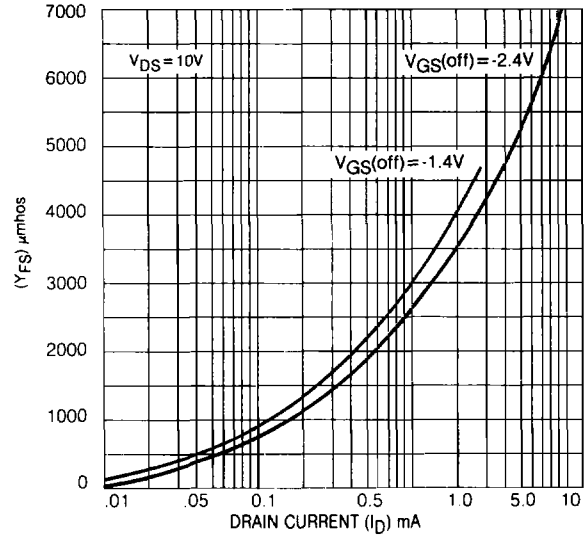
FORWARD TRANSADMITTANCE VS
GATE-SOURCE CUTOFF



TRANSFER V_S CHARACTERISTIC



FORWARD TRANSADMITTANCE

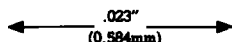
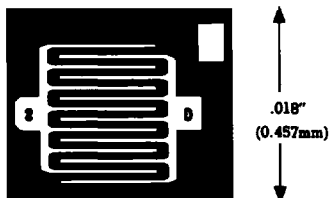


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN7.1



Die Size: 18 x 23 (mils)
 0.457 x 0.584(mm)
 3 x 3 (mils)
 Pad Size: 0.076 x 0.076(mm)
 GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
 Å Aluminum
 Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BV_{GSS}	-30	-50	-70	V	$V_{DS} = 0, I_G = 1\mu A$
I_{DSS}	5.0	60	150	mA	$V_{DS} = 20V, V_{GS} = 0$
g_{fs}		8		mmho	$V_{DS} = 20V, I_D = 2mA$
I_{GSS}		-20	-200	pA	$V_{GS} = -20V, V_{DS} = 0$
r_{DS}	20	40	100	Ω	$V_{DS} = 100mV, V_{GS} = 0$
$V_{GS(off)}$	-0.5	-4.5	-10	V	$V_{DS} = 20V, I_D = 1nA$
C_{rss}	3.0	3.5	4.0	pF	$V_{DS} = 15V, I_D = 5mA, f = 1MHz$
C_{iss}	10	12	16	pF	$V_{DS} = 15V, I_D = 5mA, f = 1MHz$
$\bar{e}_n$		7		nV/ $\sqrt{Hz}$	$V_{DS} = 15V, I_D = 5mA, f = 1KHz$

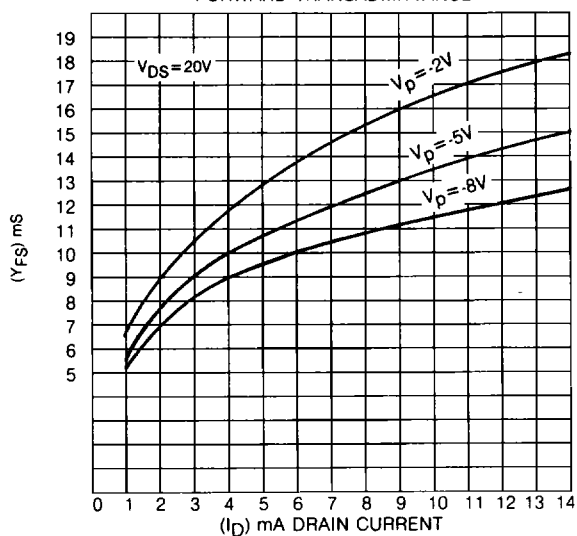
TYPICAL DEVICE TYPES: 2N4091 - 2N4093, 2N4391 - 2N4393, 2N4856 - 2N4861, KK4391 - KK4393

PRODUCT CATALOG

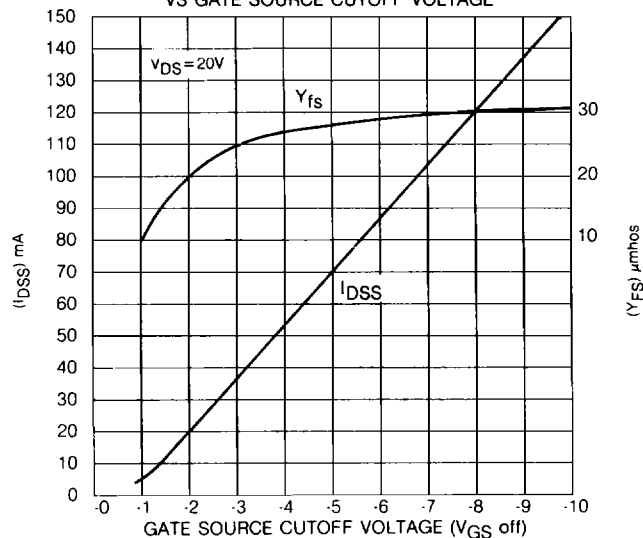
N-CHANNEL JUNCTION FET

CHIP TYPE FN7.1

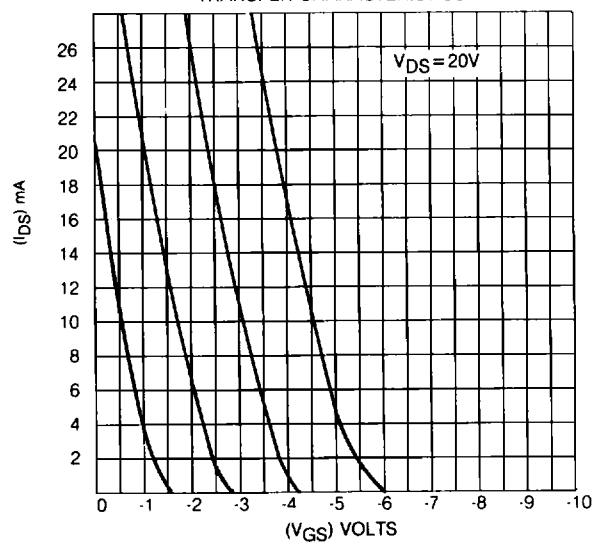
FORWARD TRANSADMITTANCE



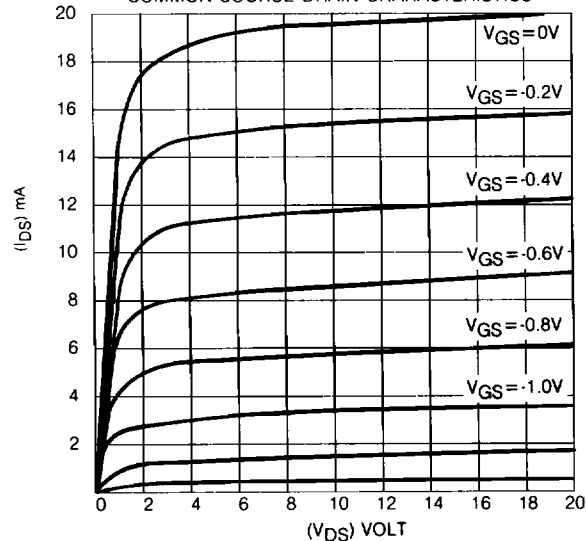
SHORT CIRCUIT FORWARD TRANSADMITTANCE
VS GATE SOURCE CUTOFF VOLTAGE



TRANSFER CHARACTERISTICS



COMMON SOURCE DRAIN CHARACTERISTICS

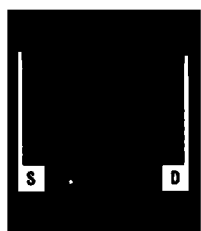


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN9



.030"
(0.762mm)

.027"
(0.686mm)

Die Size: 27 x 30 (mils)
0.686 x 0.762(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

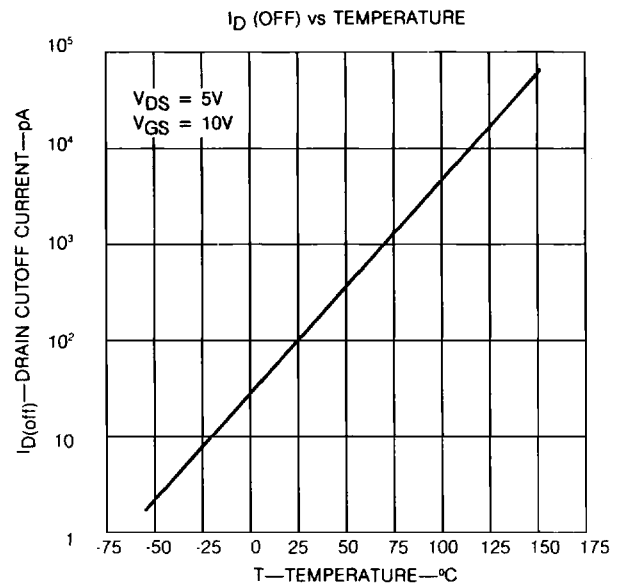
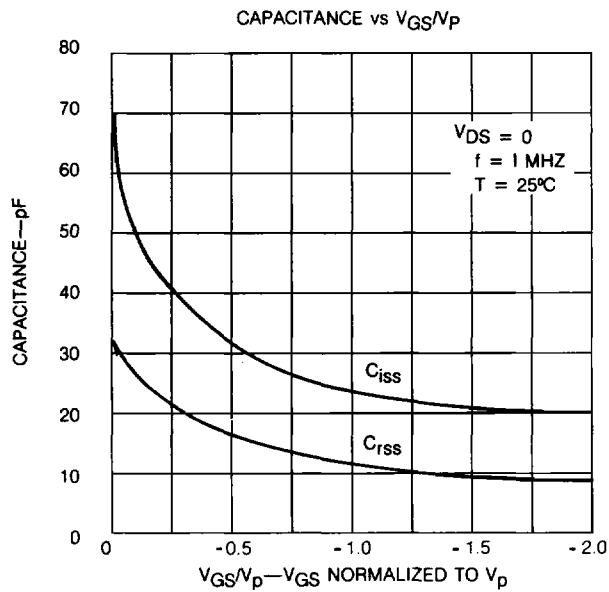
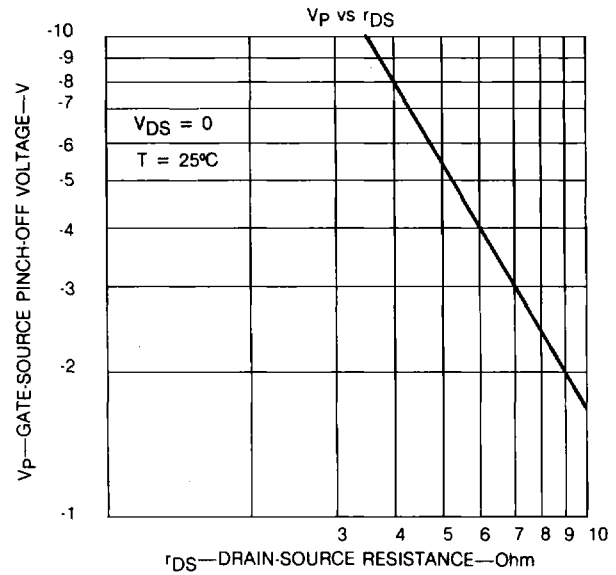
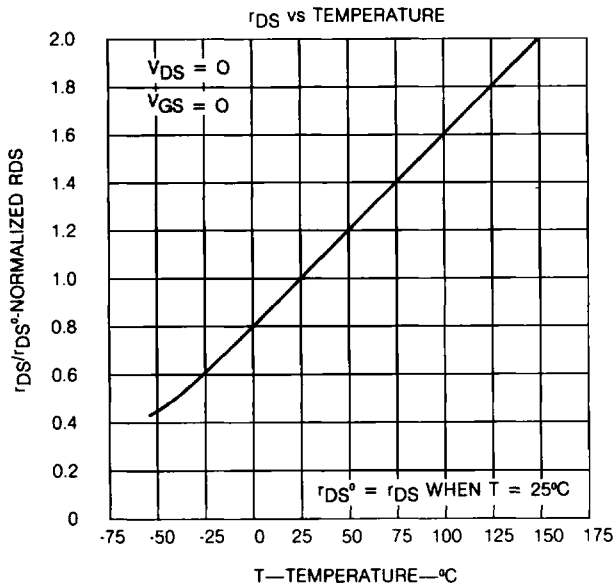
- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
$B_{V_{GS}}$	-25	-30	-45	V	$V_{DS} = 0, I_G = 1\mu A$
I_{DSS}	100	400	700	mA	$V_{DS} = 5V, V_{GS} = 0$ (pulse test)
g_{fs}		10		mmho	$V_{DG} = 10V, I_D = 2mA$
I_{GSS}		-50	-500	pA	$V_{GS} = -15V, V_{DS} = 0$
r_{DS}	4.5	6.0	20	Ω	$V_{DS} = 100mV, V_{GS} = 0$
$V_{GS(off)}$	-0.5	5.0	12.0	V	$V_{DS} = 5V, I_D = 3nA$
C_{rss}		12	20	pF	$V_{DG} = 10V, V_{DG} = 0, f = 1MHz$
C_{iss}		25	35	pF	$V_{SG} = 10V, V_{DS} = 0, f = 1MHz$
$\bar{e}_n$		5.0		nV/ $\sqrt{Hz}$	$V_{DG} = 15V, I_D = 2mA, f = 10Hz$

TYPICAL DEVICE TYPES: 2N5432 - 2N5434, SDF1000 series

CHIP TYPE FN9

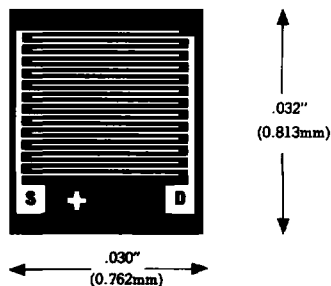


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN9.1



Die Size: 30 x 32 (mils)
0.762 x .813(mm)
.762 x .813(mils)
Pad Size: 0.102 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the die be eutectically mounted with gold silicon preform 98/2%.
- b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	- 25	- 40	- 50	V	VDS = 0, IG = 1μA
IDSS	30		1000	mA	VDS = 15V, VGS = 0
VP	-1.0		-10	V	VDS = 5V, ID, = 1nA
RON	3.5		15	OHms	VGS = 0, ID = 10mA
IGSS		30	200	pA	VDS = 0, VGS = -15V
Ciss		28	50	pF	VDS = 0, VGS = -10V, f = 1mHz
Crss		14	25	pF	VDS = 0, VGD = 10V, f = 1MHz
gfs	75	120	250	ms	VDS = 15V, VGS = 0, f = 1KHz

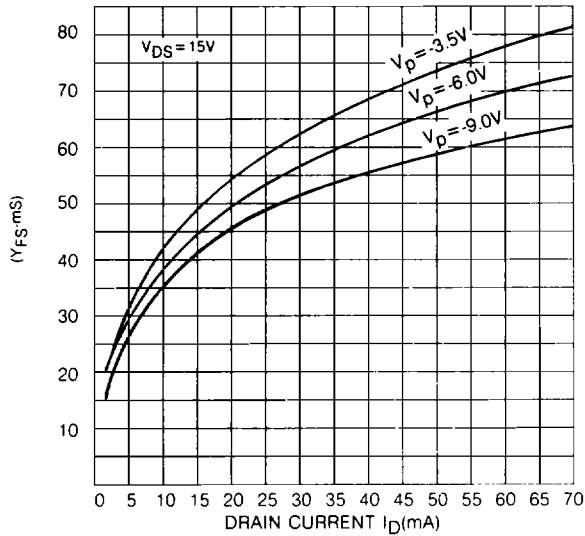
TYPICAL DEVICE TYPES: 2N5432 - 2N5434, series

PRODUCT CATALOG

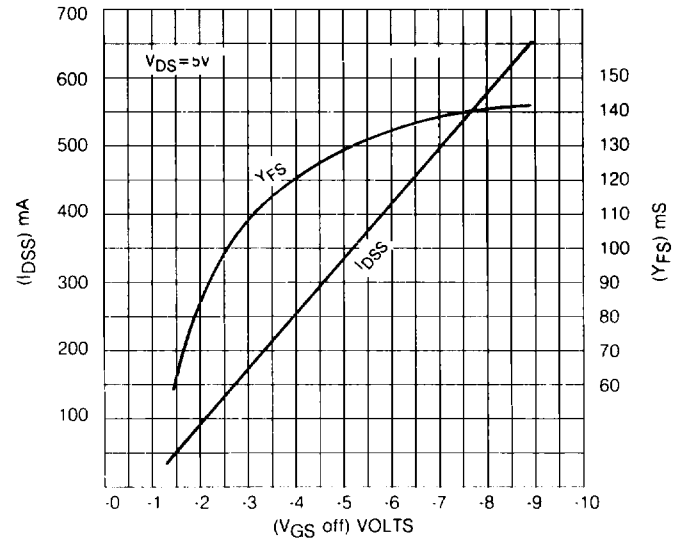
N-CHANNEL JUNCTION FET

CHIP TYPE FN9.1

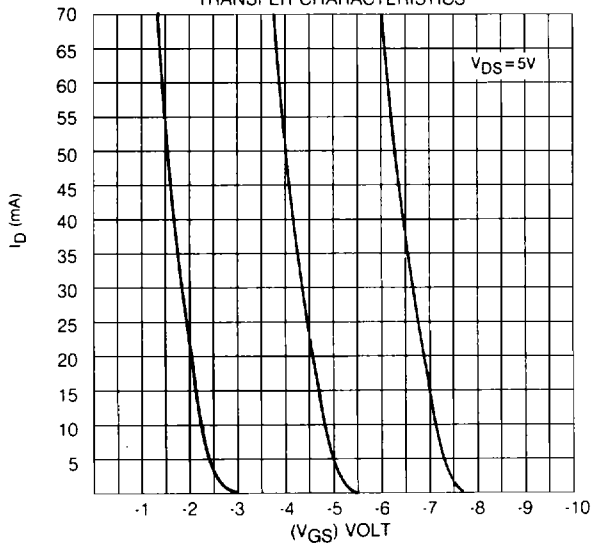
FORWARD TRANSADMITTANCE
VS. OPERATING DRAIN CURRENT



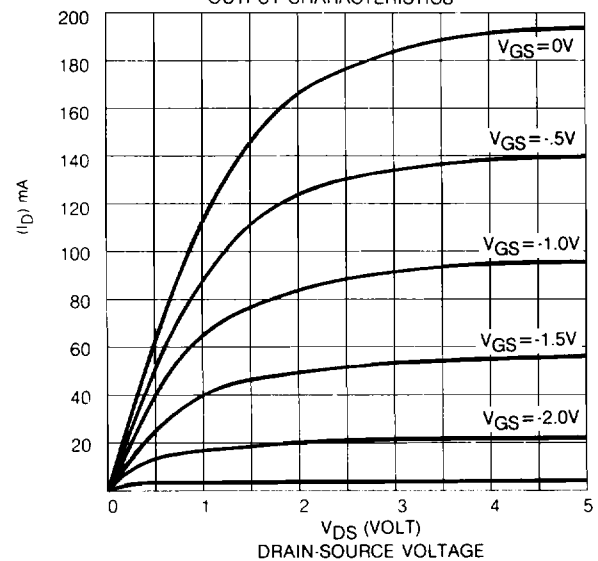
FORWARD TRANSADMITTANCE VS
GATE-SOURCE CUTOFF VOLTAGE



TRANSFER CHARACTERISTICS



OUTPUT CHARACTERISTICS

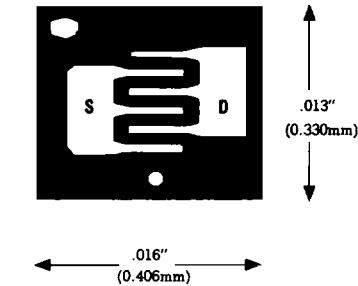


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN22.2



Die Size: 13 x 16 (mils)
0.330 x 0.406(mm)

Pad Size: 4 x 6 (mils)
0.102 x 0.152(mm)

GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

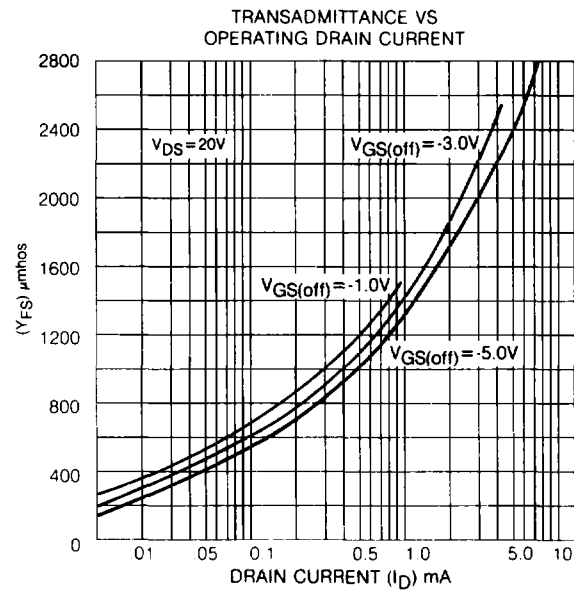
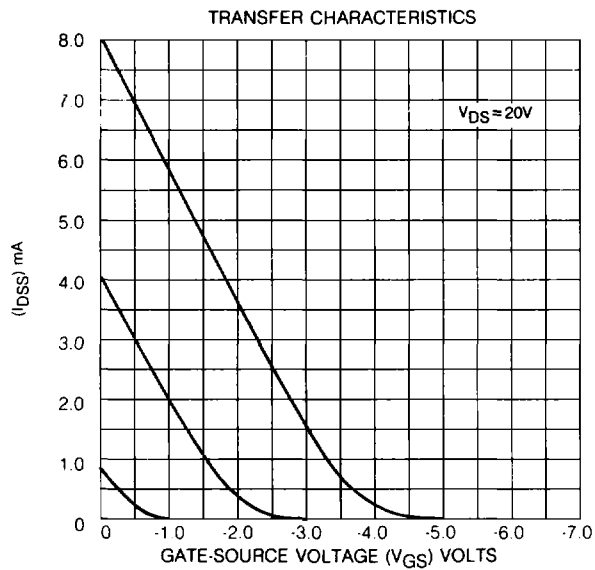
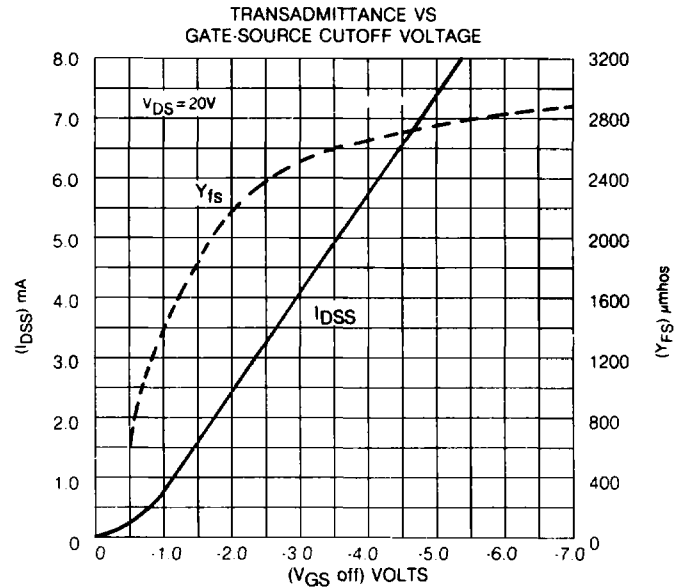
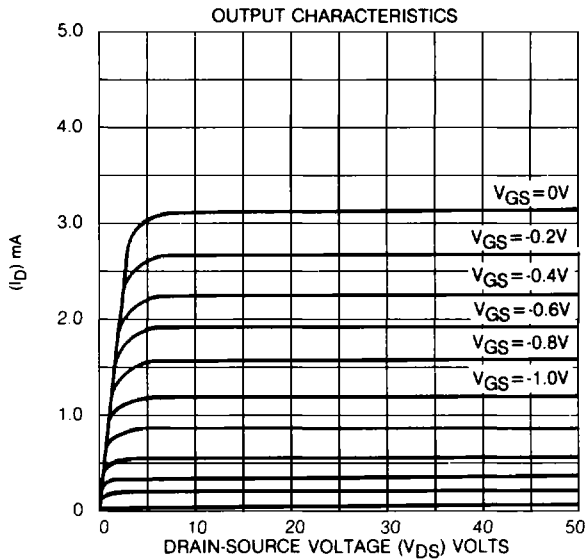
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-40	-60	-80	V	$V_{DS} = 0, I_G = 1\mu A$
IDSS	0.1	3.0	10.0	mA	$V_{DS} = 20V, V_{GS} = 0$
gfs	0.5	1.7	3.0	mmho	$V_{DS} = 20V, V_{GS} = 0$
IGSS		-10	-100	pA	$V_{GS} = -30V, V_{DS} = 0$
rDS	300	500	2000	Ω	$V_{DS} = 100mV, V_{GS} = 0$
VGS(off)	-0.5	-2.5	-6.0	V	$V_{DS} = 20V, I_D = 1nA$
Crss	0.8	1.2	1.8	pF	$V_{DS} = 20V, V_{GS} = 0, f = 1MHz$
Ciss	3.0	4.0	5.0	pF	$V_{DS} = 20V, V_{GS} = 0, f = 1MHz$
en		30	50	nV/√Hz	$V_{DS} = 20V, V_{GS} = 0, f = 100Hz$

TYPICAL DEVICE TYPES: 2N3684A, 2N4338, 2N4341, 2N4302 - 2N4304

PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP TYPE FN22...2

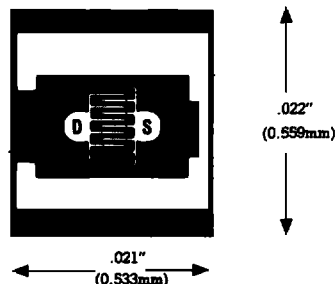


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN36.1



Die Size: 21 x 22 (mils)
 0.533 x 0.559(mm)
 3 x 3 (mils)
 Pad Size: 0.076 x 0.076(mm)
 GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
 Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
B_{VGSS}	-20	-30	-40	V	$V_{DS} = 0, I_G = 1\mu A$
I_{DSS}	5.0	15	40	mA	$V_{DS} = 15V, V_{GS} = 0$
g_{fs}	4500	8000	12000	μmho	$V_{DS} = 15V, V_{GS} = 0$
I_{GSS}		-10	-100	pA	$V_{GS} = -15V, V_{DS} = 0$
r_{DS}		100		Ω	$V_{DS} = 100mV, V_{GS} = 0$
$V_{GS(off)}$	.5	-3.0	-8.0	V	$V_{DS} = 15V, I_D = 1nA$
C_{rss}		1.0	1.5	pF	$V_{DG} = 10V, I_D = 10mA, f = 1MHz$
C_{iss}		4.0	6.0	pF	$V_{DG} = 10V, I_D = 10mA, f = 1MHz$

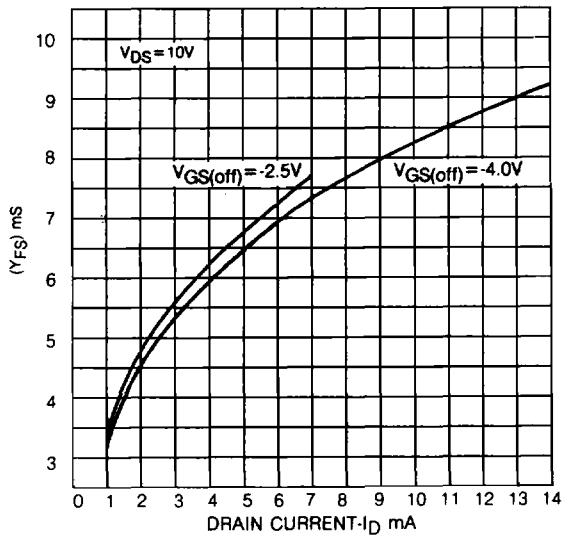
TYPICAL DEVICE TYPES: 2N5397, 2N5398, U257, 2N5911, 2N5912

PRODUCT CATALOG

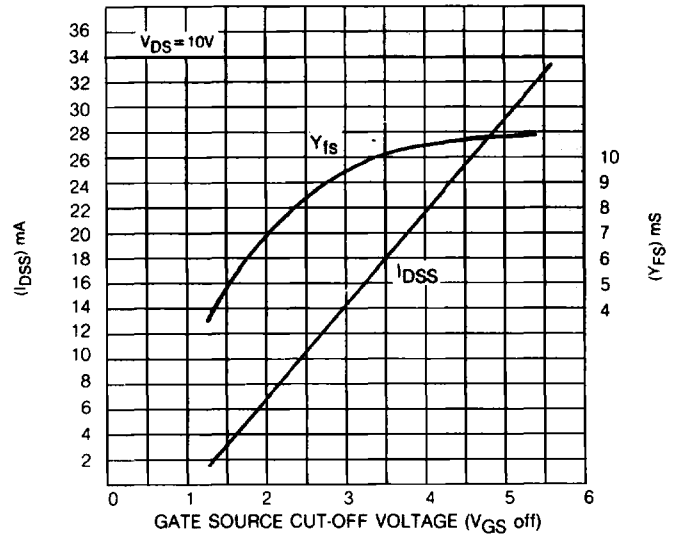
N-CHANNEL JUNCTION FET

CHIP TYPE FN36.1

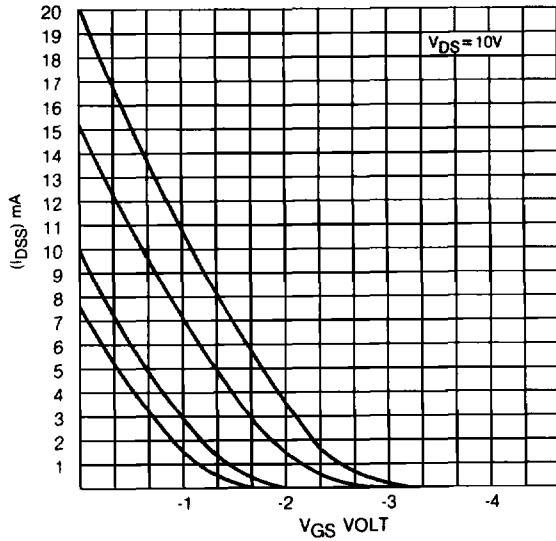
COMMON SOURCE, SHORT CIRCUIT FORWARD TRANSADMITTANCE
VS OPERATING DRAIN CURRENT



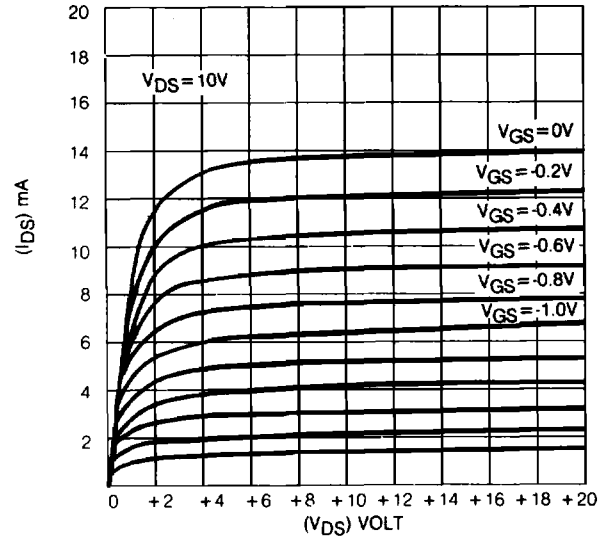
ZERO GATE VOLTAGE VS
DRAIN CURRENT I_{DSS} (mA)



TRANSFER CHARACTERISTICS



OUTPUT CHARACTERISTICS

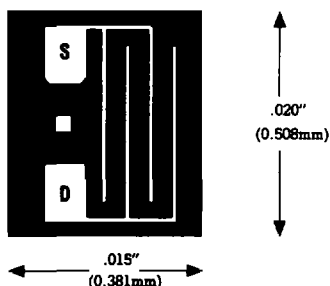


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN39.8



Die Size: 15 x 20 (mils)
 0.381 x 0.508(mm)
 3.5 x 4.5 (mils)
 Pad Size: 0.069 x 0.114(mm)
 GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
 Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

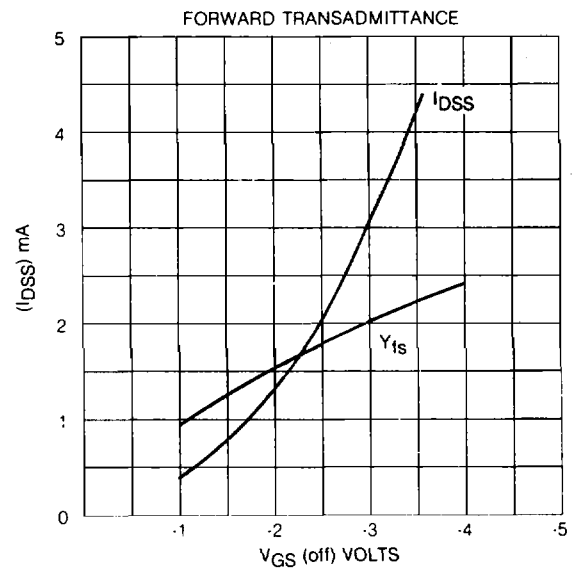
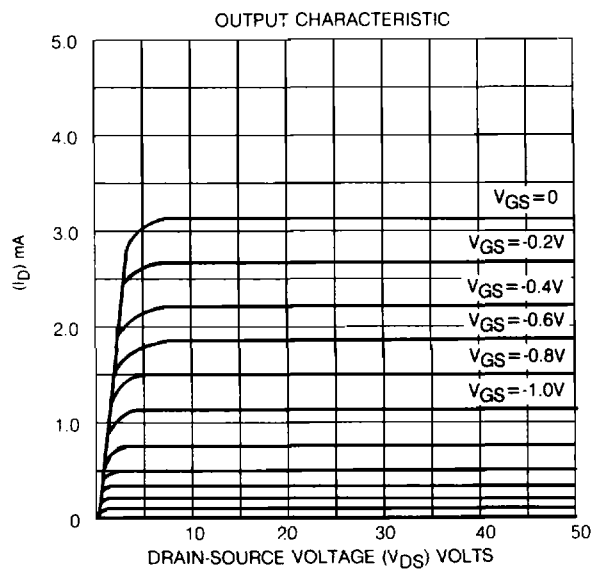
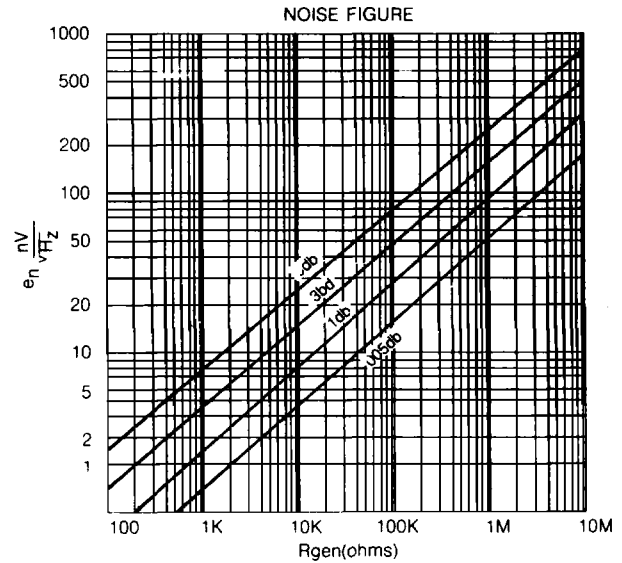
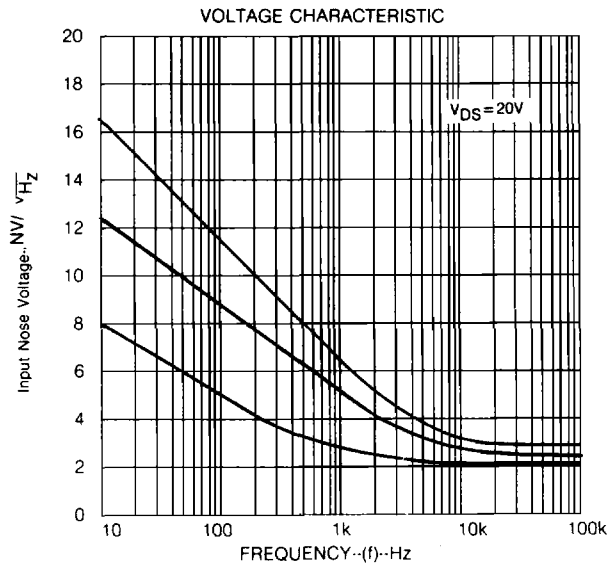
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BV_{GS}	-40	-50	-70	V	$V_{DS} = 0, I_G = 1\mu A$
I_{DSS}	0.1	3.0	10	mA	$V_{DS} = 20V, V_{GS} = 0$
g_{fs}	0.5	1.8	3.5	μmho	$V_{DS} = 20V, V_{GS} = 0$
I_{GSS}		-10	-100	pA	$V_{GS} = -30V, V_{DS} = 0$
r_{DS}		500	2000	Ω	$V_{DS} = 100mV, V_{GS} = 0$
$V_{GS(off)}$		-2.5	-6.0	V	$V_{DS} = 20V, I_D = 1mA$
C_{rss}		2.0	4.0	pF	$V_{DS} = 20V, V_{GS} = 0, f = 1MHz$
C_{iss}		5.0	7.0	pF	$V_{DS} = 20V, V_{GS} = 0, f = 1MHz$
$\bar{e}_n$		10	30	nV/ $\sqrt{Hz}$	$V_{DS} = 15V, I_D = .2mA, f = 10Hz$

TYPICAL DEVICE TYPES: SDF500 Thru SDF 505, 2N5515 - 2N5524, 2N4867, 2N4868

PRODUCT CATALOG

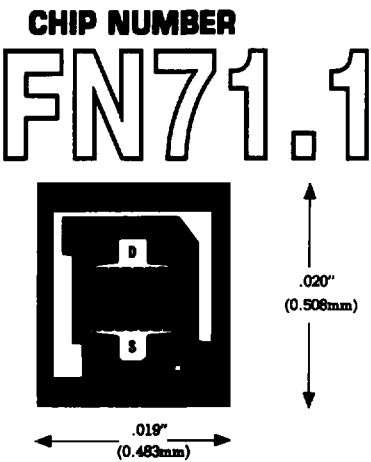
N-CHANNEL JUNCTION FET

CHIP TYPE FN39.8



PRODUCT CATALOG

N-CHANNEL JUNCTION FET



CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

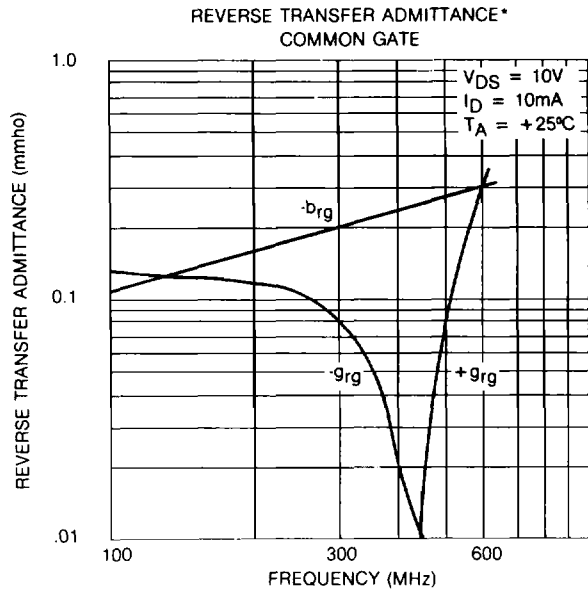
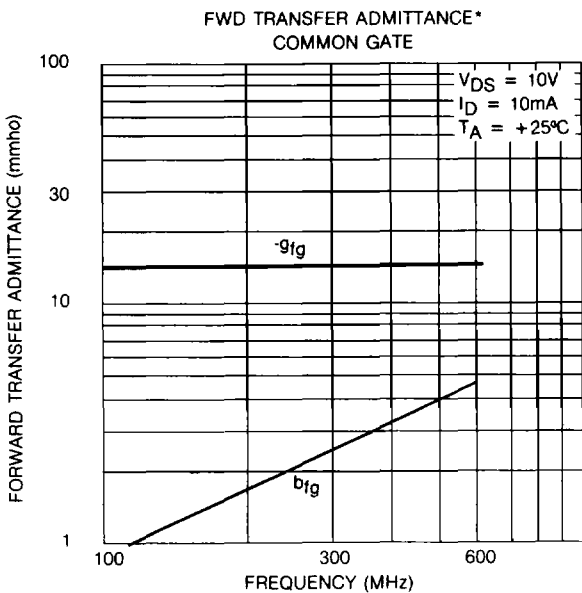
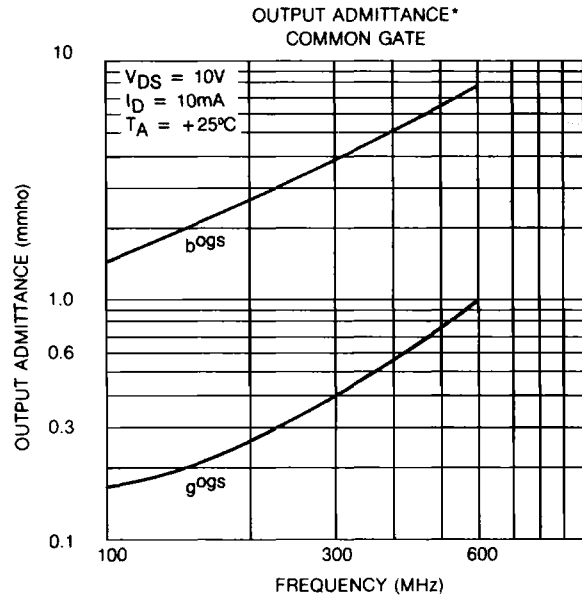
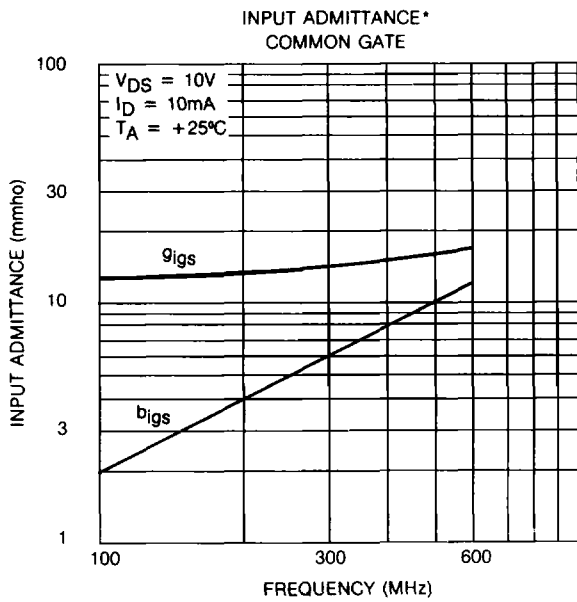
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	-20	-30	-40	V	$V_{DS} = 0, I_G = 1\mu A$
IDSS	10	30	60	mA	$V_{DS} = 10V, I_G = 1\mu A$
g_{fs}		15	20	mmho	$V_{DS} = 10V, I_D = 10mA, f = 1KHz$
IGSS		40	150	pA	$V_{GS} = -15V, V_{DS} = 0$
VGS	- 1	-5	- 8V	V	$V_D = 10V, I_D = 1nA$
NF			1.5	dB	$V_{DS} = 10V, I_D = 10mA, f = 100MHz$
Cgd		1.8	2.5	pF	$V_{DS} = 10V, I_D = 10mA, f = 1MHz$
Cgs		4.0	5.0	pF	$V_{DS} = 10V, I_D = 10mA, f = 1MHz$
$\bar{e}_n$		10	20	nV/√Hz	$V_{DS} = 10V, I_D = 10mA, f = 100Hz$

TYPICAL DEVICE TYPES: U308 - U311

PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP TYPE FN71.1

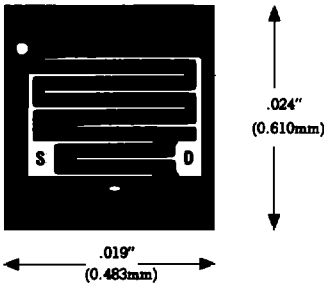


PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP NUMBER

FN88.8



Die Size: 19 x 24 (mils)
0.483 x 0.610(mm)
3 x 4 (mils)
Pad Size: 0.076 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

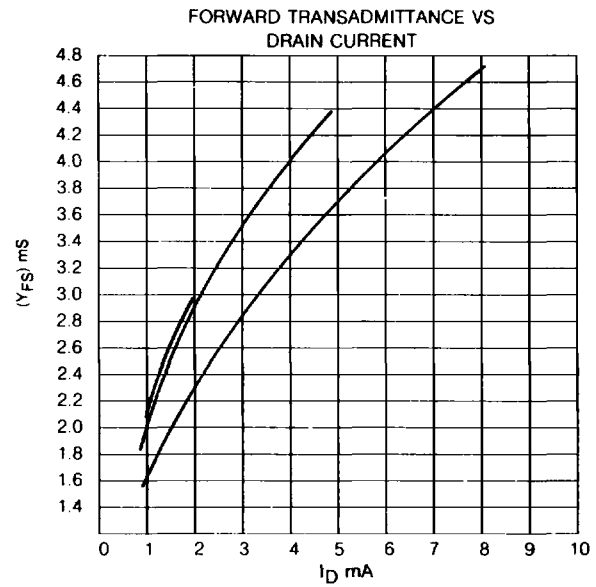
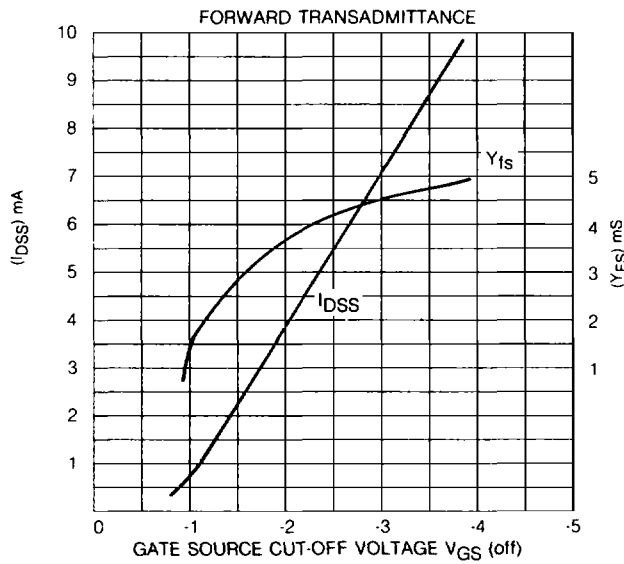
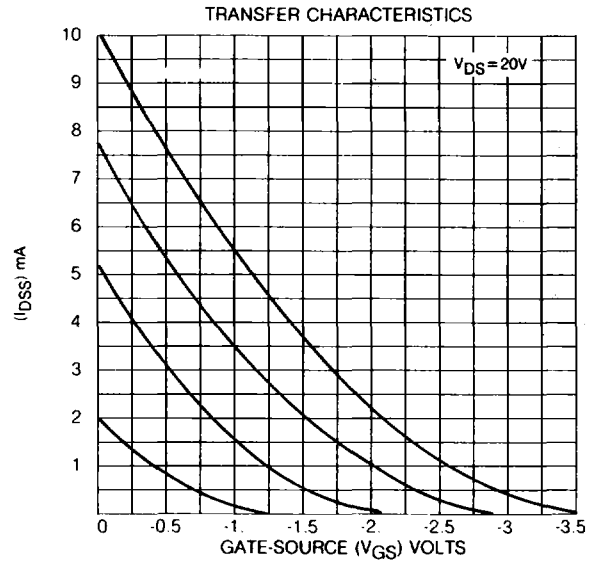
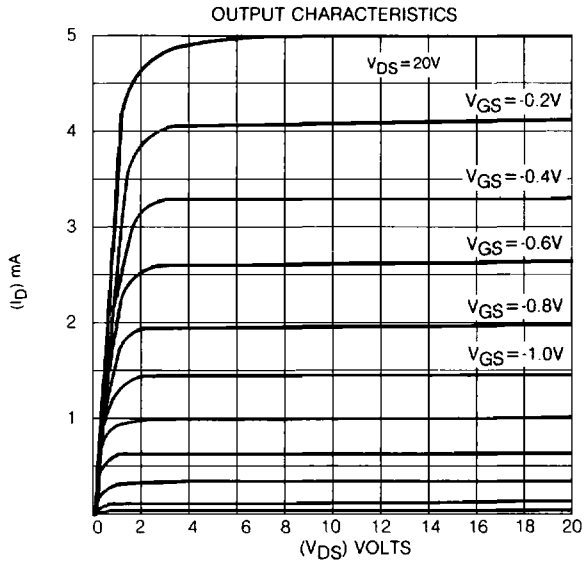
PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BV _{GSS}	-40	-60	-80	V	V _{DS} = 0, I _G = 1μA
I _{DSS}	0.2	3.0	10	mA	V _{DS} = 20V, V _{GS} = 0
g _{fs}	0.4	2.5	5.5	mmho	V _{DS} = 20V, V _{GS} , = 0
R _{DS}		500		Ω	V _{DS} = 100mV, V _{GS} = 0
V _{GS(off)}		-2.0	-4.5	V	V _{DS} = 20V, I _D = 1nA
C _{rss}		3.0	5.0	pF	V _{DS} = 20V, V _{GS} = 0, f = 1MHz
C _{iss}		15	20	pF	V _{DS} = 20V, V _{GS} = 0, f = 1MHz
ē _n		7	30	nV/√Hz	V _{DG} = 15V, I _D = .2mA, f = 10Hz
G _{os}		1.0	5	μmho	V _{DS} = 20V, V _{GS} = 0, f = 1KHz

TYPICAL DEVICE TYPES: 2N4869, 2N5592-2N5594

PRODUCT CATALOG

N-CHANNEL JUNCTION FET

CHIP TYPE FN88.8

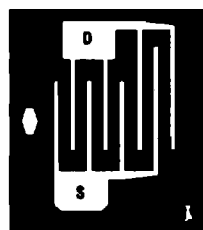


PRODUCT CATALOG

P-CHANNEL JUNCTION FET

CHIP NUMBER

FP5.3



.020"
(0.508mm)

.015"
(0.381mm)

Die Size: .15 x .20 (mils)
0.381 x 0.508(mm)
3 x 4 (mils)
Pad Size: 0.076 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	30	40	50	V	$V_{DS} = -0, I_G = 1\mu A$
I_{DSS}	0.5	8.0	20	mA	$V_{DS} = -20V, V_{GS} = 0$
g_{fs}		4000		μmho	$V_{DS} = -20V, V_{GS} = 0$
I_{GSS}		30	200	pA	$V_{GS} = -20V, V_{DS} = 0$
r_{DS}		300		Ω	$V_{DS} = 100mV, V_{GS} = 0$
$V_{GS(off)}$	1.0	2.5	8.0	V	$V_{DS} = -20V, I_D = 1nA$
C_{rss}		1.8	2.5	pF	$V_{DS} = -20V, V_{GS} = 0, f = 1MHz$
C_{iss}		7.0	9.0	pF	$V_{DS} = -20V, V_{GS} = 0, f = 1MHz$

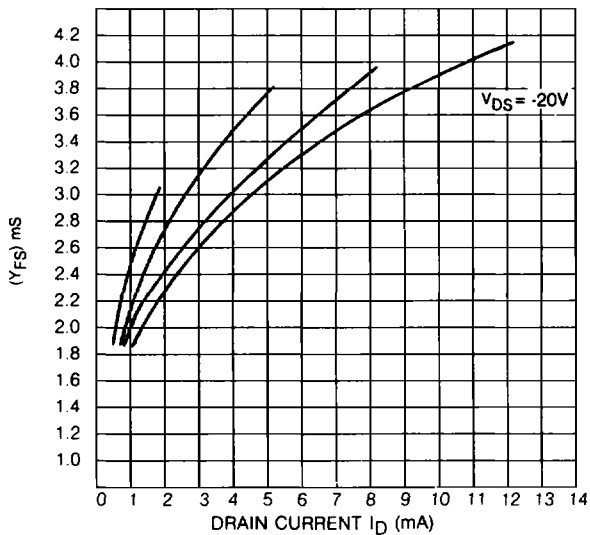
TYPICAL DEVICE TYPES: UC400, UC410, UC420, 2N2607, 2N2608, 2N2609, 2N2842, 2N2844

PRODUCT CATALOG

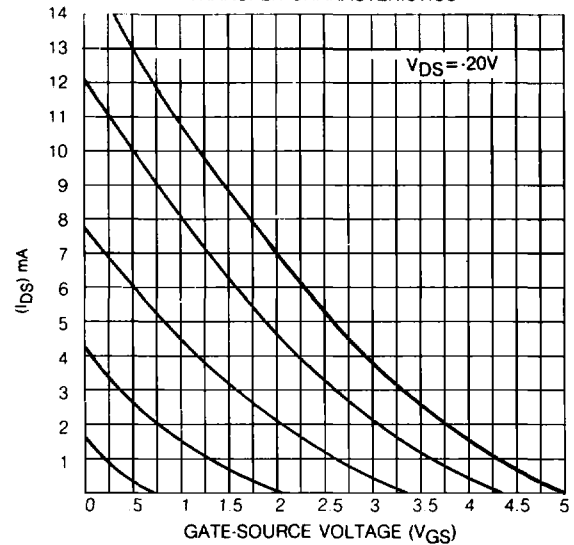
P-CHANNEL JUNCTION FET

CHIP TYPE FP5.3

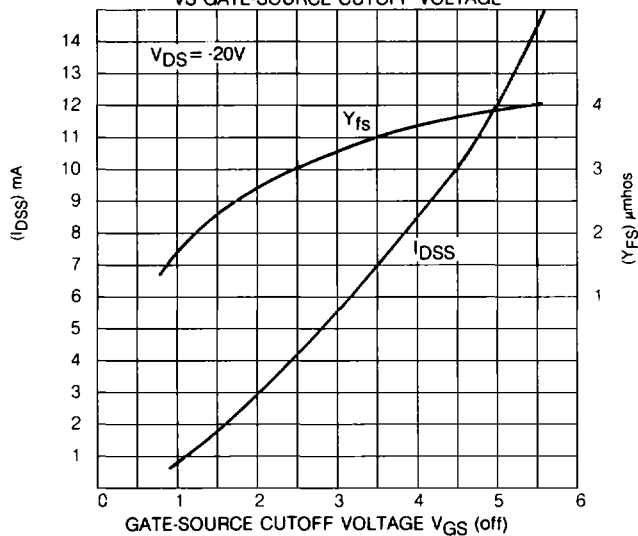
FORWARD TRANSADMITTANCE
VS OPERATING DRAIN CURRENT



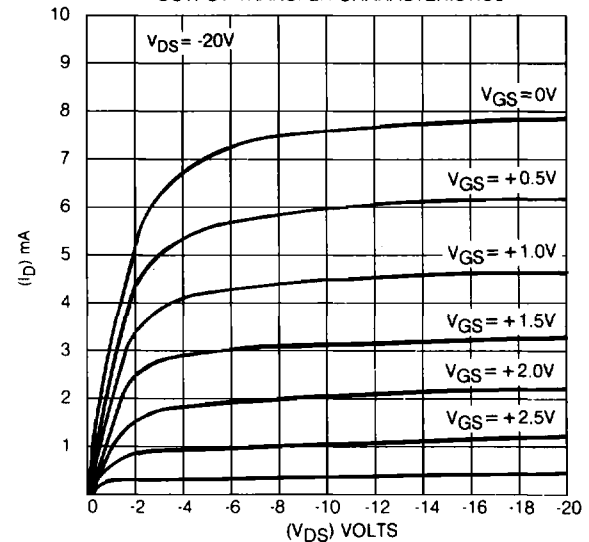
TRANSFER CHARACTERISTICS



FORWARD TRANSADMITTANCE
VS GATE-SOURCE CUTOFF VOLTAGE

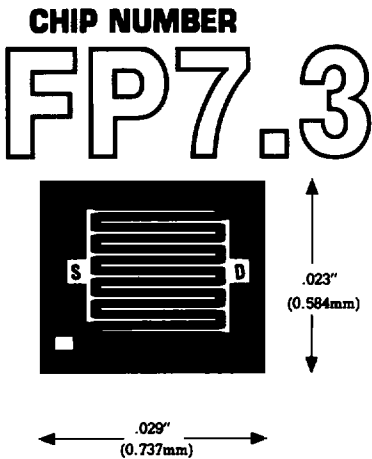


OUTPUT TRANSFER CHARACTERISTICS



PRODUCT CATALOG

P-CHANNEL JUNCTION FET



Die Size: 29 x 23 (mils)
0.737 x 0.584(mm)
3 x 3 (mils)
Pad Size: 0.076 x 0.076(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000 Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

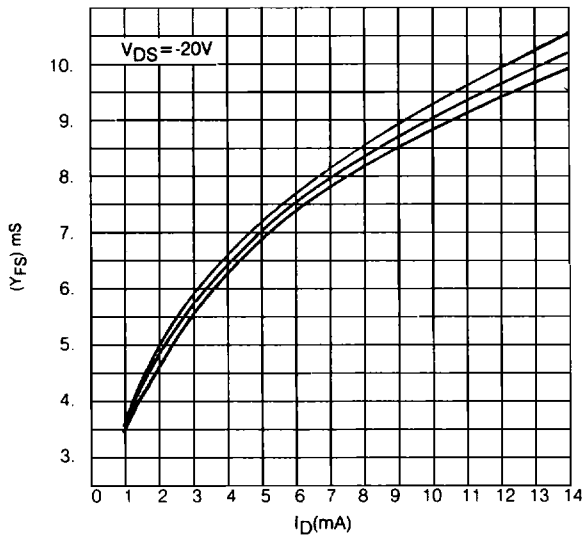
TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	25	40	50	V	$V_{DS} = 0, I_G = 1\mu A$
IDSS	-5.0	-30	-120	mA	$V_{DS} = -15V, V_{GS} = 0$
gfs		10		mmho	$V_{DS} = -15V, V_{GS} = 0$
IGSS		50	500	pA	$V_{GS} = 20V, V_{DS} = 0$
rDS	40	100	200	Ω	$V_{DS} = 100mV, V_{GS} = 0$
VGS(off)	1.0	4.0	10	V	$V_{DS} = -15V, I_D = 1nA$
Crss		4.5		pF	$V_{DS} = 0, V_{GS} = 10V, f = 1MHz$
Ciss		20	25	pF	$V_{DS} = -15V, V_{GS} = 0, f = 1MHz$

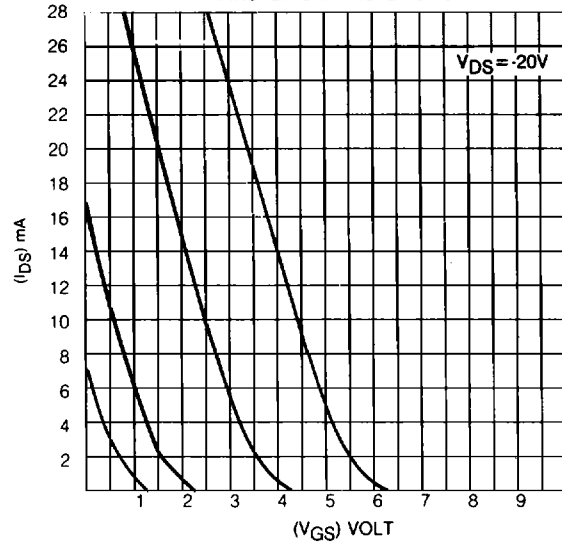
TYPICAL DEVICE TYPES: 2N5018, 2N5019, 2N5114 - 2N5116, 2N5319

CHIP TYPE FP7.3

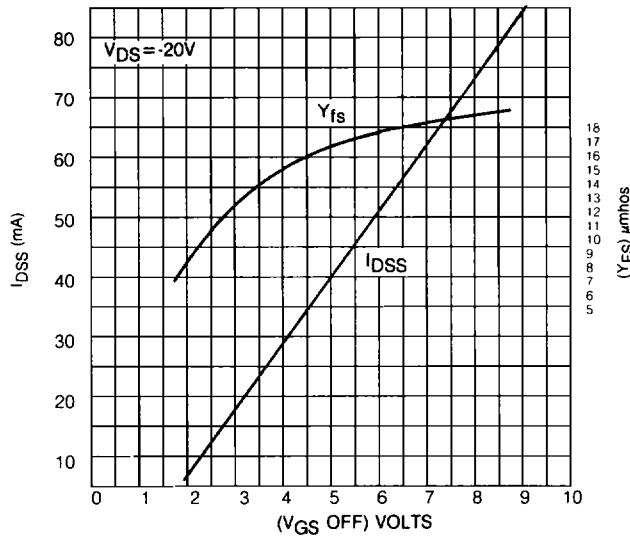
FORWARD TRANSADMITTANCE
VS. OPERATING DRAIN CURRENT



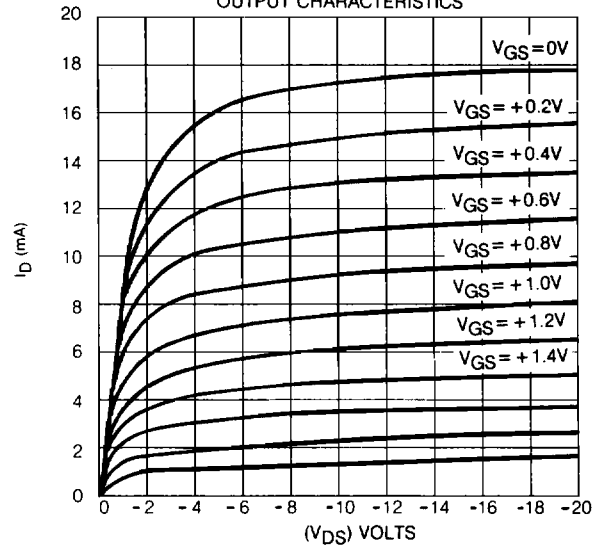
TRANSFER CHARACTERISTIC



FORWARD TRANSADMITTANCE



OUTPUT CHARACTERISTICS

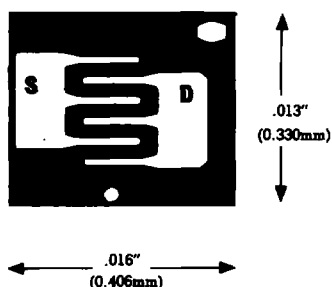


PRODUCT CATALOG

P-CHANNEL JUNCTION FET

CHIP NUMBER

FP22.2



Die Size: 13 x 16 (mils)
 0.330 x 0.406(mm)
 4 x 6 (mils)
 Pad Size: 0.102 x 0.152(mm)
 GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000
 Å Aluminum

Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the die be eutectically mounted with gold silicon preform 98/2%.
- 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	40	55		V	$V_{DS} = 0, I_G = 1\mu A$
IDSS	0.1		6	mA	$V_{DS} = -15V, V_{GS} = 0$
V _p	0.5		6	V	$V_{DS} = -15V, I_D = 1nA$
IGSS		20	100	pA	$V_{DS} = 0, V_{GS} = 30V$
G _m	0.2	1	2	mS	$V_{DS} = -15V, V_{GS} = 0, f = 1KHz$
C _{iss}		4	5	pF	$V_{DS} = -15, V_{GS} = 0, f = 1MHz$
C _{rss}		0.9	1.5	pF	$V_{DS} = -15V, V_{GS} = 0, f = 1MHz$

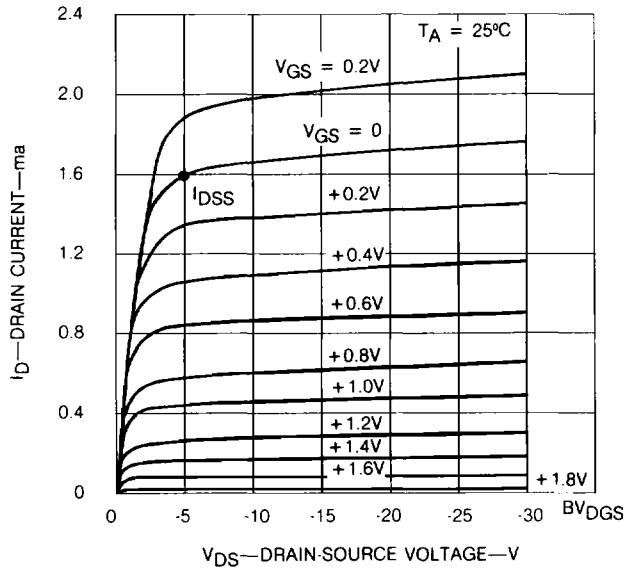
TYPICAL DEVICE TYPES: 2N2606 - 2N2608, 2N3376, 2N3378, 2N3695 - 2N3698

PRODUCT CATALOG

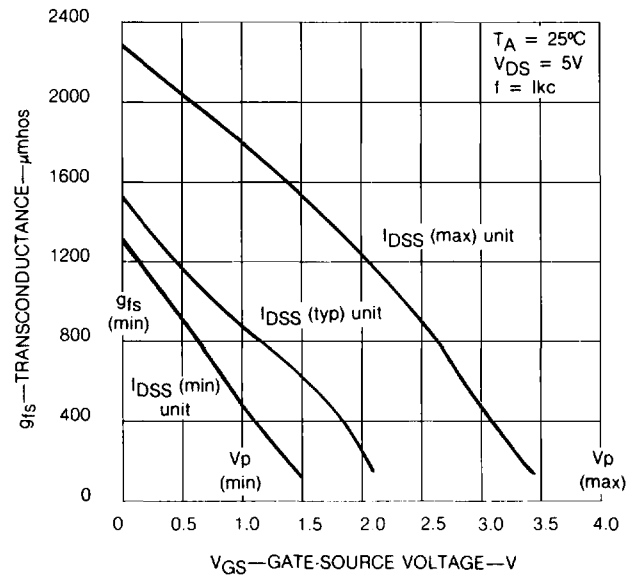
P-CHANNEL JUNCTION FET

CHIP TYPE FP22.2

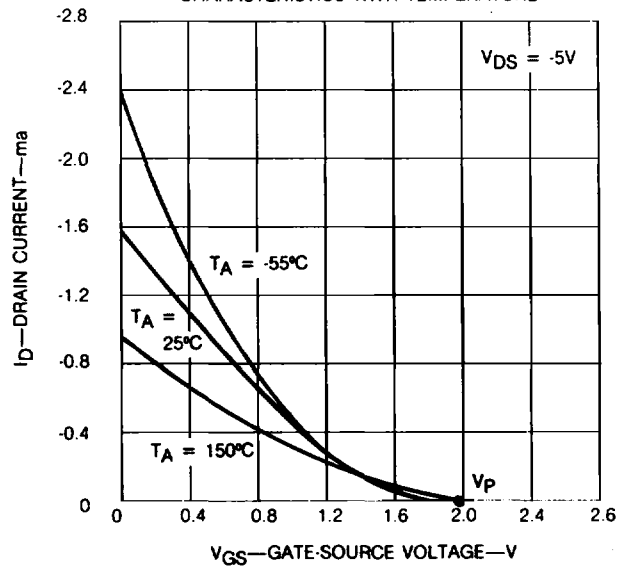
TYPICAL OUTPUT CHARACTERISTICS



TRANSCONDUCTANCE vs GATE-SOURCE VOLTAGE



TYPICAL TRANSFER CHARACTERISTICS WITH TEMPERATURE

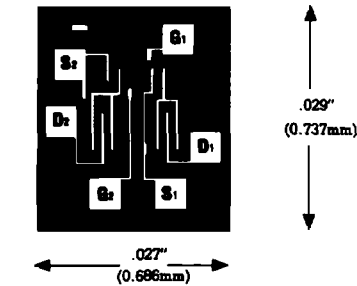


PRODUCT CATALOG

N-CHANNEL DUAL JUNCTION FET CASCODE

CHIP NUMBER

DCN2.3



Die Size: 27 x 29 (mils)
0.686 x 0.737(mm)
4 x 4 (mils)
Pad Size: 0.102 x 0.102(mm)
GATE-SUBSTRATE

CONTACT METALLIZATION

Top Contact: > 12,000 Å Aluminum
Backside Contact: 3,000 Å Gold

ASSEMBLY RECOMMENDATIONS

- It is advisable that:
- a) the die be eutectically mounted with gold silicon preform 98/2%.
 - b) 1 mil (0.0254mm) aluminum wire be ultrasonically attached to the top contact.

TYPICAL ELECTRICAL CHARACTERISTICS

PARAMETER	MIN.	TYP	MAX.	UNIT	TEST CONDITIONS
BVGSS	- 40	- 50		V	VDS = 0, IG = -1μA
IDSS	30		500	μA	VDS = 10V, VGS = 0
IG		0.05	1	pA	VDS = 10, ID, = 30μA
Vp	- 0.6		- 4.5	V	VDS = 10, ID = 1nA
gfs	40		150	μs	VDS = 10, ID = 30μA
yOS		0.05	1	μs	VDS = 10, ID = 30μA
Ciss			4	pF	VDS = 10, ID = 30μA
Crss			0.5	pF	VDS = 10, ID = 30μA

TYPICAL DEVICE TYPES: SDF530 - SDF537

CONTACT METALLIZATION

Top Contact: 22,000
A Aluminum

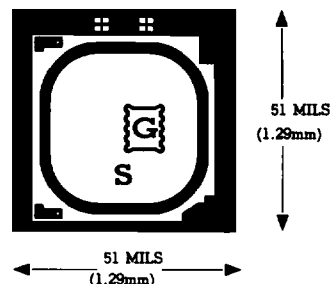
Backside Contact: 3,000 A Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the chip be eutectically mounted with gold silicon preform 98/2%.
- b) 8 mil aluminum wire be ultrasonically attached to the top contact.

CHIP NUMBER
SVN101



Die Size: 51x51 (mils)
1.29x1.29 (mm)
Pad Size: 20x40 (mils)
0.51x1.02 (mm)

CONTACT METALLIZATION

Top Contact: 22,000
A. Aluminum

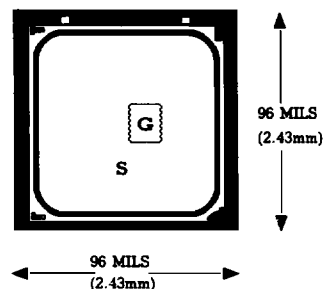
Backside Contact: 3,000 A Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the chip be eutectically mounted with gold silicone preform 98/2%.
- b) 8 mil aluminum wire be ultrasonically attached to the top contact.

CHIP NUMBER
SVN105



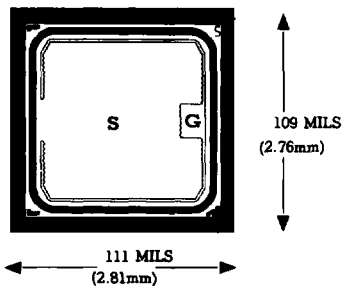
Die Size: 96x96 (mils)
2.43x2.43 (mm)
Pad Size: 20x40 (mils)
0.51x1.02 (mm)

PRODUCT CATALOG

SOLITRON POWER MOS FET

CHIP NUMBER

SVN402



Die Size: 20x40 (mils)
0.51x1.02 (mm)
Pad Size: 111x109 (mils)
2.81x2.76 (mm)

CONTACT METALLIZATION

Top Contact: 22,000
A Aluminum

Backside Contact: 3,000 A Gold

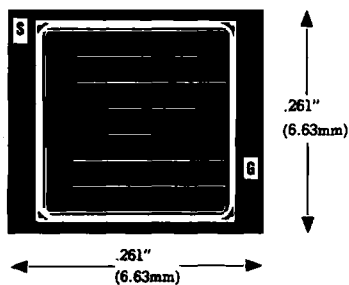
ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the chip be eutectically mounted with gold silicon preform 98/2%.
- b) 8 mil aluminum wire be ultrasonically attached to the top contact.

CHIP NUMBER

SVN415



Die Size: 261 x 261 (mils)
6.63 x 6.63 (mm)
Pad Size: 60 x 40 (mils)
1.524 x 1.016 (mm)

CONTACT METALLIZATION

Top Contact: 22,000
A Aluminum

Backside Contact: 3,000 A Gold

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the chip be eutectically mounted with gold silicon preform 98/2%.
- b) 8 mil aluminum wire be ultrasonically attached to the top contact.