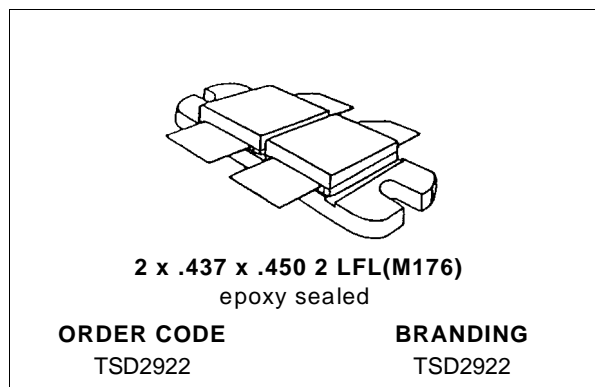


RF & MICROWAVE TRANSISTORS HF/VHF/UHF N-CHANNEL MOSFETS

PRODUCT DEVELOPMENT DATA SHEET

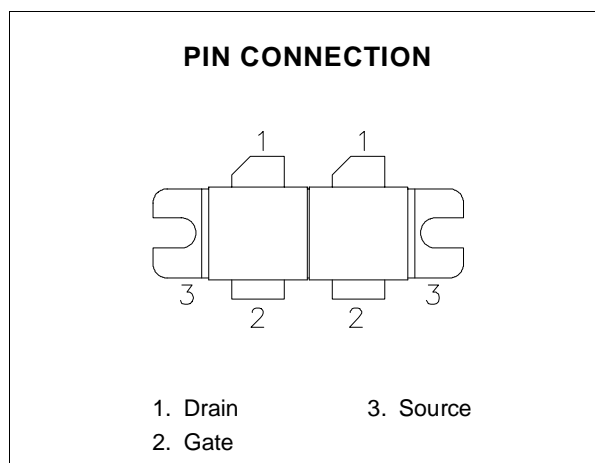
This data sheet contains the design criteria and target specifications for a product which is currently under development by SGS-THOMSON. The design criteria and specifications of this item could change prior to introduction and SGS-THOMSON assumes no liability for use of information contained herein.

- GOLD METALLIZATION
- NO THERMAL RUNAWAY
- COMMON SOURCE CONFIGURATION
- $P_{OUT} = 300W$ MIN. WITH 12 dB GAIN



DESCRIPTION

The TSD2922 is a gold metallized N-Channel MOS field-effect RF power transistor. The TSD2922 is intended for use in 50 V dc large signal applications up to 200 MHz.



ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
$V_{(BR)DSS}$	Drain-Source Voltage	125	V
V_{DGR}	Drain-Gate Voltage	125	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current	TBD	A
P_{DISS}	Power Dissipation	500	W
T_J	Junction Temperature	+200	$^{\circ}C$
T_{STG}	Storage Temperature	- 65 to +150	$^{\circ}C$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	.35	$^{\circ}C/W$
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ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)

STATIC

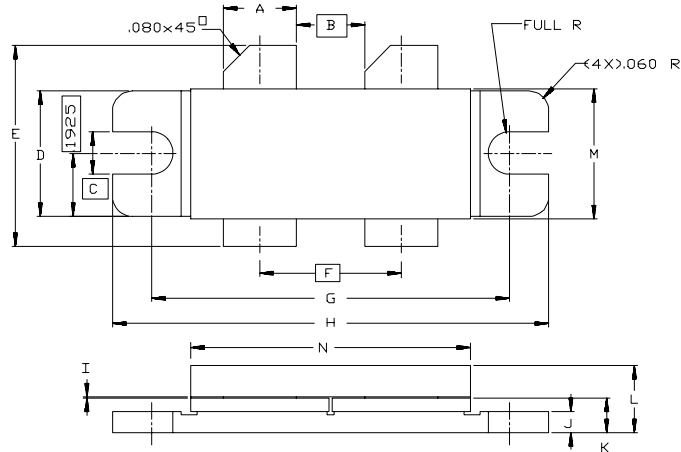
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$V_{(BR)DSS}$	$V_{GS} = 0V$	$I_{DS} = 100\text{ mA}$		125	—	—	V
I_{DSS}	$V_{GS} = 0V$	$V_{DS} = 50V$		—	—	5.0	mA
G_{FS}	$V_{DS} = 10V$	$I_D = 5A$		4	—	—	mhos
C_{ISS}	$V_{GS} = 0V$	$V_{DS} = 50V$	$F = 1MHz$	—			V
C_{OSS}	$V_{GS} = 0V$	$V_{DS} = 50V$	$F = 1MHz$	—			mA
C_{RSS}	$V_{GS} = 0V$	$V_{DS} = 50V$	$F = 1MHz$	—			—
$V_{GS(TH)}$	$V_{DS} = 10V$	$I_D = 250\text{ mA}$		1	—	5	—

DYNAMIC

Symbol	Test Conditions				Value			Unit
					Min.	Typ.	Max.	
P_L	$f = 175\text{ MHz}$	$V_{DS} = 50\text{ V}$	$I_{DQ} = 500\text{ mA}$		300		—	W
G_{PS}	$f = 175\text{ MHz}$	$V_{DS} = 50\text{ V}$	$I_{DQ} = 500\text{ mA}$		12	13	—	dB
η_D	$f = 175\text{ MHz}$	$V_{DS} = 50\text{ V}$	$I_{DQ} = 500\text{ mA}$		50	60	—	%

PACKAGE MECHANICAL DATA

Ref.: Dwg. No. 12-0176
UDCS No. 1011001 rev B



SGS-THOMSON MICROELECTRONICS		CONT'D			
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84	K	.100/2,54	.115/2,92
B	.210/5,33		L		.230/5,84
C	.125/3,18		M	.395/10,03	.407/10,34
D	.380/9,65	.390/9,91	N	.850/21,59	.870/21,10
E	.580/14,73	.620/15,75			
F	.435/11,05				
G	1.090/27,69	1.105/28,07			
H	1.335/33,91	1.345/34,16			
I	.003/0,08	.007/0,18			
J	.060/1,52	.070/1,78			

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