SGS-THOMSON MICROELECTRONICS

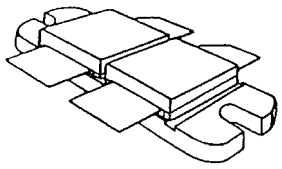
TSD2922

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



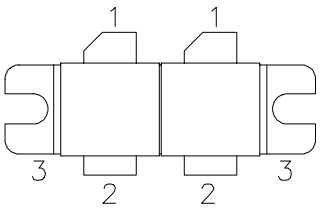
2 x .437 x .450 2 LFL(M176)
epoxy sealed

ORDER CODE	BRANDING
TSD2922	TSD2922

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.

PIN CONNECTION



1. Drain
2. Gate
3. Source

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°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	°C
T_{STG}	Storage Temperature	- 65 to +150	°C

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	.35	°C/W

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

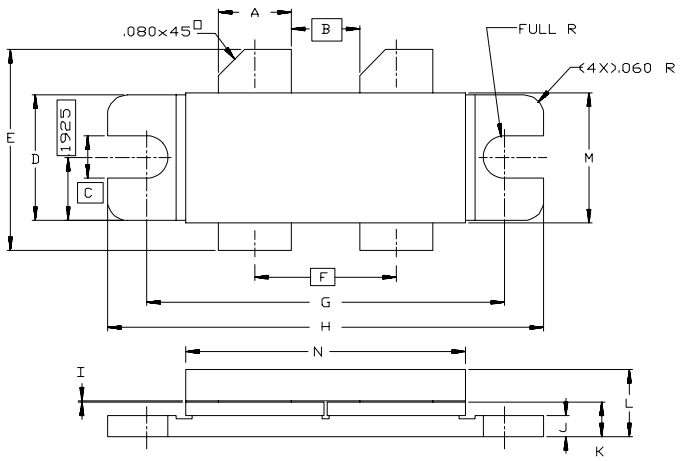
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$V_{(BR)DSS}$	V_{GS} = 0V	I_{DS} = 100 mA		125	—	—	V
I_{DSS}	V_{GS} = 0V	V_{DS} = 50V		—	—	5.0	mA
G_{FS}	V_{DS} = 10V	I_D = 5A		4	—	—	mhos
C_{ISS}	V_{GS} = 0V	V_{DS} = 50V	F = 1MHz	—			V
C_{OSS}	V_{GS} = 0V	V_{DS} = 50V	F = 1MHz	—			mA
C_{RSS}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

DYNAMIC

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

PACKAGE MECHANICAL DATA

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



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84
B	.210/5,33	
C	.125/3,18	
D	.380/9,65	.390/9,91
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

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.100/2,54	.115/2,92
L		.230/5,84
M	.395/10,03	.407/10,34
N	.850/21,59	.870/21,10