

FEATURES :

- LOW INTERMODULATION DISTORTION
IM₃ = -45 dBc at P_o = 25.5 dBm,
Single Carrier Level
- HIGH POWER
P_{1dB} = 36.5 dBm at 6.4 GHz to 7.2 GHz
- HIGH EFFICIENCY
η_{add} = 34 % at 6.4 GHz to 7.2 GHz
- HIGH GAIN
G_{1dB} = 8.0 dB at 6.4 GHz to 7.2 GHz
- BROAD BAND INTERNALLY MATCHED
- HERMETICALLY SEALED PACKAGE

RF PERFORMANCE SPECIFICATIONS (T_a = 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1 dB Compression Point	P _{1dB}	V _{DS} = 10 V f = 6.4 ~ 7.2 GHz	dBm	35.5	36.5	—
Power Gain at 1 dB Compression Point	G _{1dB}		dB	7.0	8.0	—
Drain Current	I _{DS}		A	—	1.1	1.3
Gain Flatness	ΔG		dB	—	—	± 0.6
Power Added Efficiency	η _{add}		%	—	34	—
3rd Order Intermodulation Distortion	IM ₃	Note 1	dBc	-42	-45	—
Channel-Temperature Rise	ΔT _{ch}	V _{DS} × I _{DS} × R _{th} (c-c)	°C	—	—	80

ELECTRICAL CHARACTERISTICS (T_a = 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	V _{DS} = 3 V I _{DS} = 1.5 A	mS	—	900	—
Pinch-off Voltage	V _{GSoff}	V _{DS} = 3 V I _{DS} = 15 mA	V	-1	-2.5	-4.0
Saturated Drain Current	I _{DSS}	V _{DS} = 3 V V _{GS} = 0 V	A	—	2.6	3.5
Gate-Source Breakdown Voltage	V _{GS0}	I _{GS} = -50 μA	V	-5	—	—
Thermal Resistance	R _{th} (c-c)	Channel to Case	°C/W	—	4.5	6.5

Note 1 : 2 tone Test Pout = 25.5 dBm Single Carrier Level.

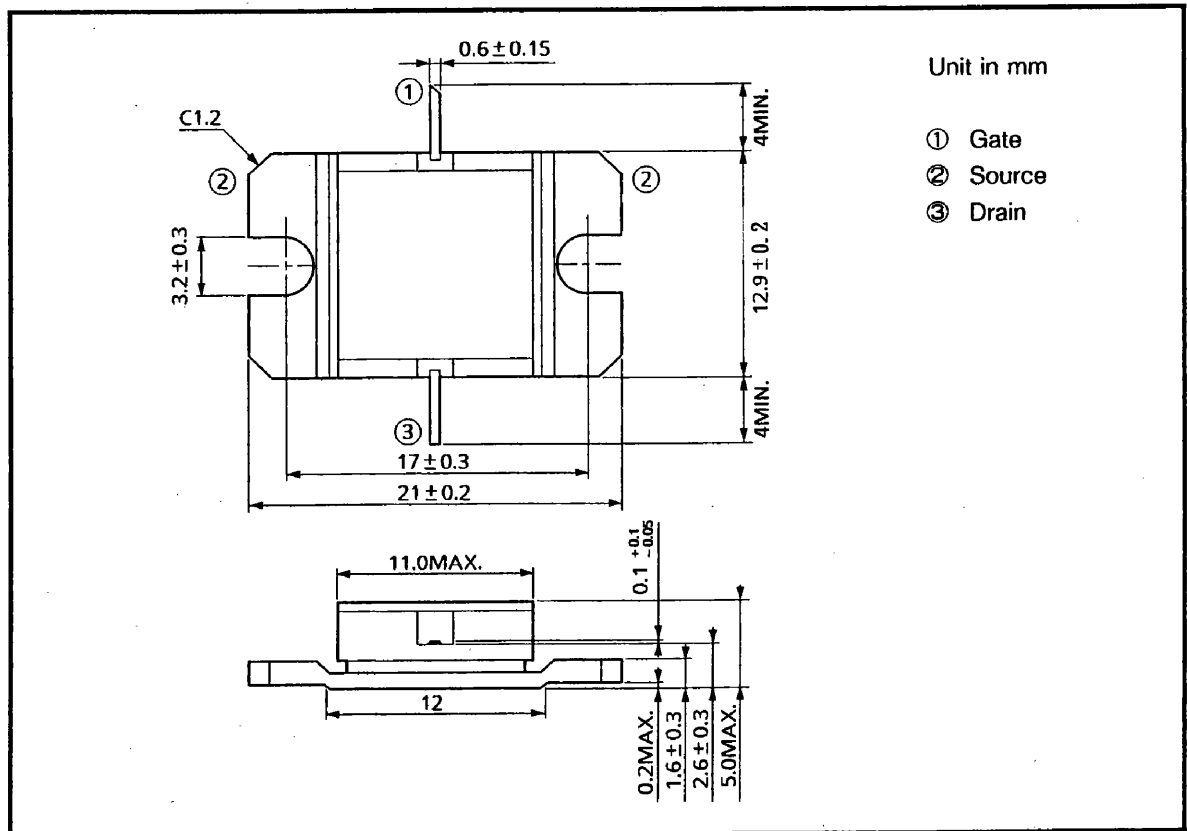
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ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V _{DS}	V	15
Gate-Source Voltage	V _{GS}	V	-5
Drain Current	I _{DS}	A	3.5
Total Power Dissipation (T _C = 25°C)	P _T	W	23
Channel Temperature	T _{ch}	°C	175
Storage Temperature	T _{stg}	°C	-65~175

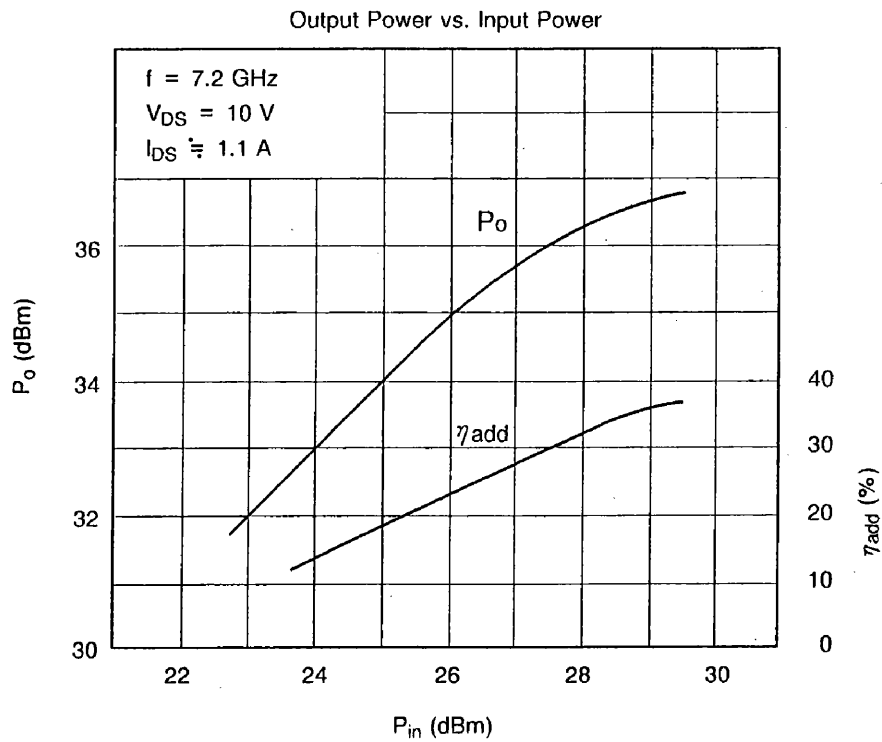
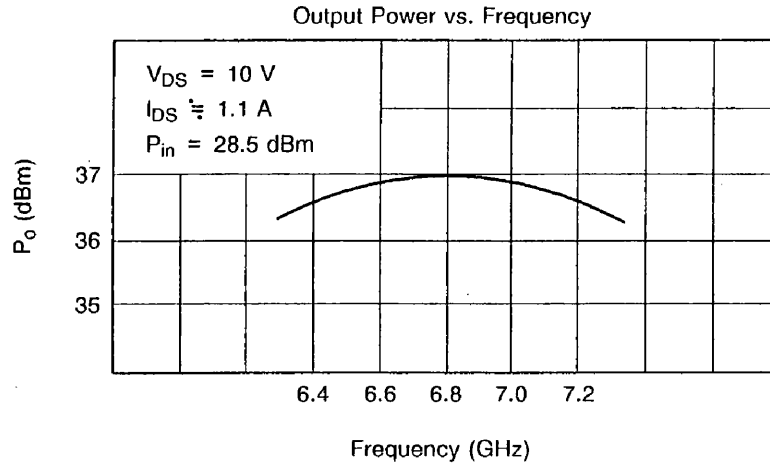
PACKAGE OUTLINE (2-11D1B)



HANDLING PRECAUTIONS FOR PACKAGED TYPE

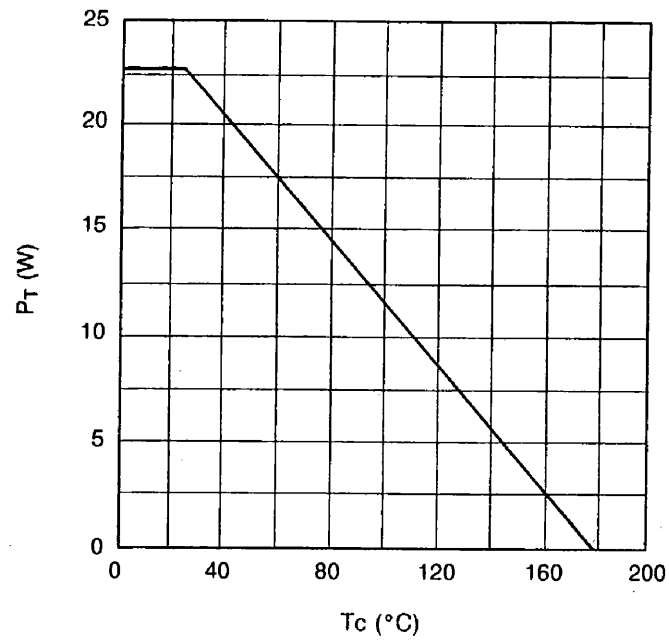
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

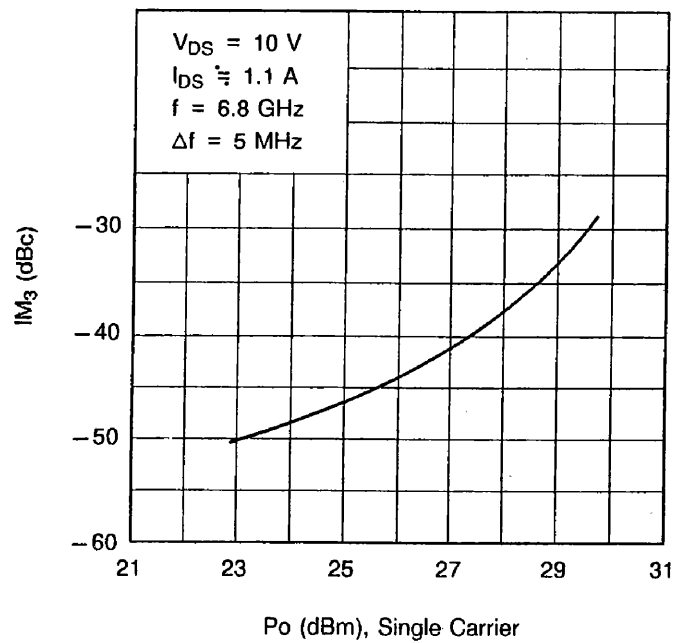


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POWER DISSIPATION VS. CASE TEMPERATURE



IM₃ VS. OUTPUT POWER CHARACTERISTICS

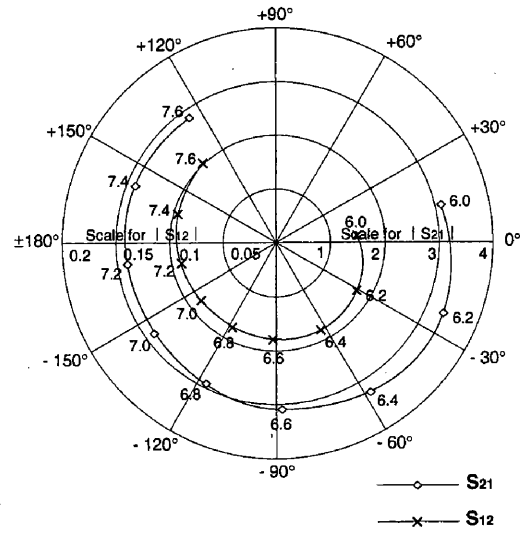
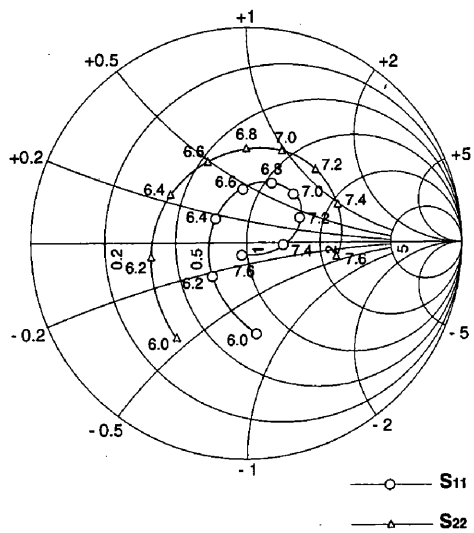


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TIM6472-4SL S-PARAMETERS (MAGN.and ANGLES)

$V_{DS} = 10V, I_{DS} = 1.1A$

$f = 6.0 \sim 7.6GHz$



FREQUENCY (GHz)	S_{11}		S_{21}		S_{12}		S_{22}	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6.0	0.42	-84	3.11	13	0.074	5	0.54	-127
6.2	0.22	-136	3.33	-23	0.086	-31	0.45	-172
6.4	0.18	142	3.26	-58	0.090	-63	0.42	147
6.6	0.25	94	3.08	-88	0.089	-92	0.42	115
6.8	0.30	67	2.92	-117	0.088	-118	0.44	90
7.0	0.31	46	2.83	-144	0.088	-143	0.46	69
7.2	0.27	25	2.81	-172	0.091	-168	0.47	47
7.4	0.17	-3	2.84	158	0.096	164	0.46	23
7.6	0.06	-112	2.84	125	0.101	133	0.42	-8