

#### FEATURES:

- LOW INTERMODULATION DISTORTION  
IM<sub>3</sub> = -45 dBc at P<sub>o</sub> 35.0 dBm
- HIGH POWER  
P<sub>1dB</sub> = 45.5 dBm at 6.4 to 7.2 GHz
- HIGH EFFICIENCY  
 $\eta_{add}$  = 37% at 6.4 to 7.2 GHz
- HIGH GAIN  
G<sub>1dB</sub> = 8.0dB at 6.4 to 7.2 GHz
- BROAD BAND INTERNALLY MATCHED
- HERMETICALLY SEALED PACKAGE

#### RF PERFORMANCE SPECIFICATIONS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1 dB Compression Point	P <sub>1dB</sub>	V <sub>DS</sub> = 10V f = 6.4~7.2GHz	dBm	45.0	45.5	-
Power Gain at 1 dB Compression Point	G <sub>1dB</sub>		dB	7.0	8.0	-
Drain Current	I <sub>DS</sub>		A	-	8.0	9.0
Gain Flatness	$\Delta G$		dB	-	-	$\pm 0.8$
Power Added Efficiency	$\eta_{add}$		%	-	37	-
3rd Order Intermodulation Distortion	IM <sub>3</sub>	Note 1	dBc	-42	-45	-
Channel Temperature Rise	$\Delta T_{ch}$	V <sub>DS</sub> × I <sub>DS</sub> × R <sub>th(c-c)</sub>	°C	-	-	100

#### ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Trans-conductance	gm	V <sub>DS</sub> = 3V I <sub>DS</sub> = 10.5A	mS	-	6500	-
Pinch-off Voltage	V <sub>GSoff</sub>	V <sub>DS</sub> = 3V I <sub>DS</sub> = 140mA	V	-1.0	-2.5	-4.0
Saturated Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 3V V <sub>GS</sub> = 0V	A	-	20	26
Gate-Source Breakdown Voltage	V <sub>GS0</sub>	I <sub>GS</sub> = -420 $\mu$ A	V	-5	-	-
Thermal Resistance	R <sub>th(c-c)</sub>	Channel to Case	°C/W	-	1.0	1.3

Note 1: 2 tone Test Pout = 35dBm Single Carrier Level.  
Recommended Gate Resistance(R<sub>g</sub>) : R<sub>g</sub> = R<sub>g1</sub>(10  $\Omega$ ) + R<sub>g2</sub>(18  $\Omega$ ) = 28  $\Omega$  (MAX.)

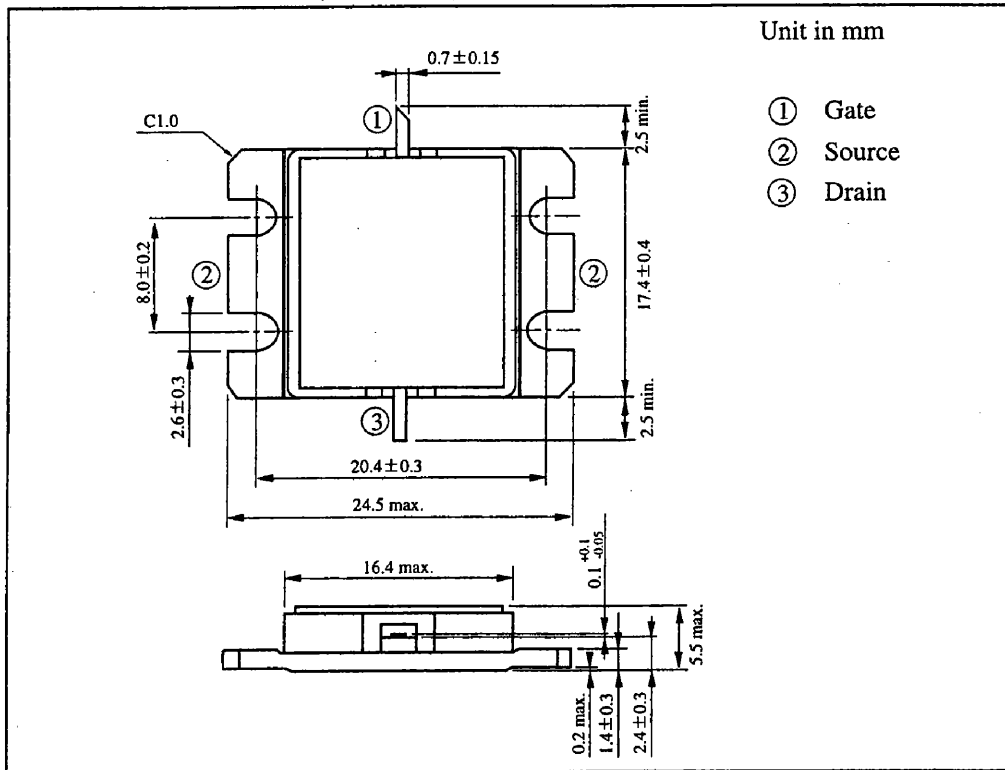
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# TIM6472-35SL

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V <sub>DS</sub>	V	15
Gate-Source Voltage	V <sub>GS</sub>	V	-5
Drain Current	I <sub>DS</sub>	A	26
Total Power Dissipation (Tc=25°C)	P <sub>T</sub>	W	115
Channel Temperature	T <sub>ch</sub>	°C	175
Storage Temperature	T <sub>stg</sub>	°C	-65~175

## PACKAGE OUTLINE (2-16G1B)

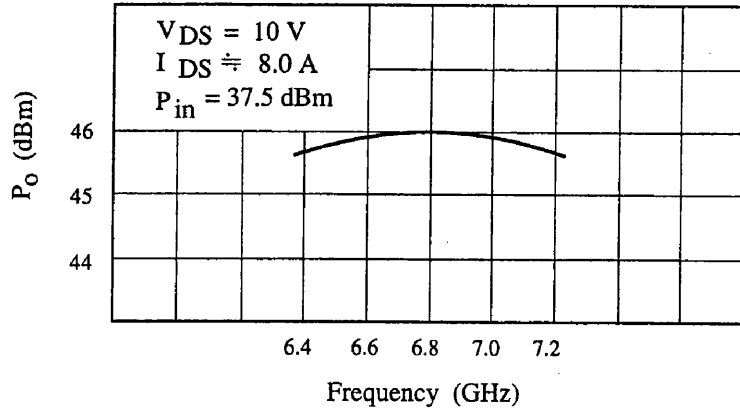


## HANDLING PRECAUTIONS FOR PACKAGED TYPE

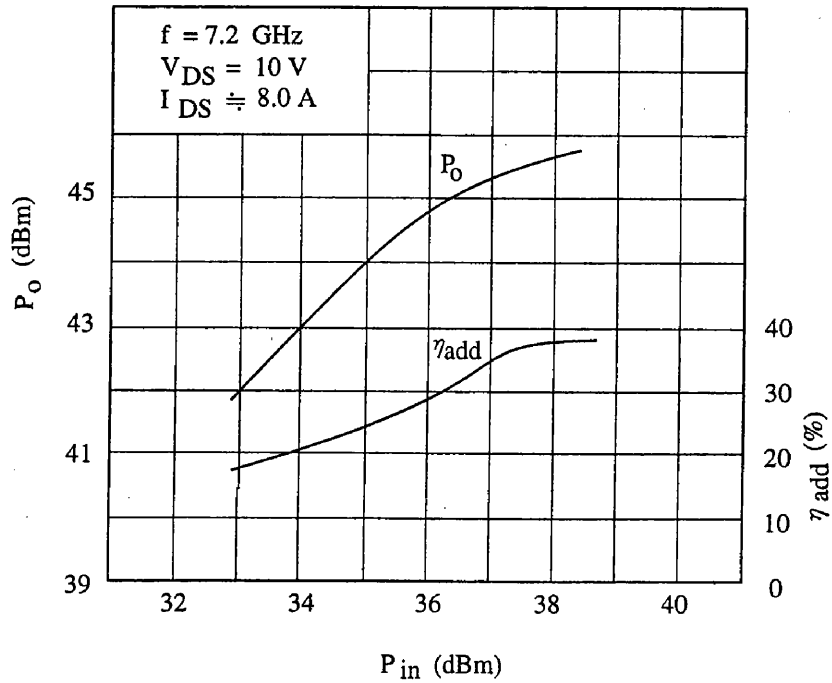
Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.

RF PERFORMANCES

Output Power vs. Frequency

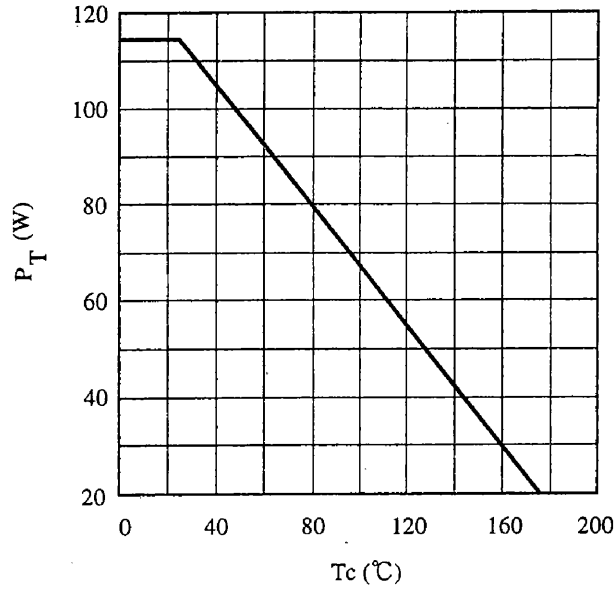


Output Power vs. Input Power



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## POWER DISSIPATION VS. CASE TEMPERATURE



## IM<sub>3</sub> VS. OUTPUT POWER CHARACTERISTICS

