

**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES

Revision date: 27<sup>th</sup>/Apr.'02

mitsubishi RF POWER MOS FET

# RD30HVF1

Silicon MOSFET Power Transistor, 175MHz 30W

## DESCRIPTION

RD30HVF1 is a MOS FET type transistor specifically designed for VHF RF power amplifiers applications.

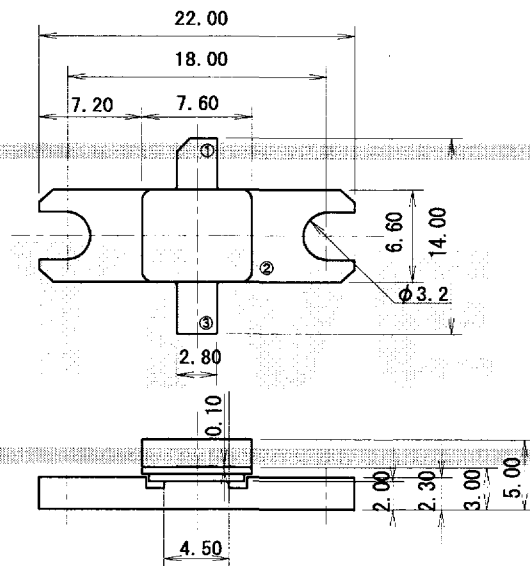
## FEATURES

- High power gain:  
Pout>30W, Gp>14.7dB @ Vdd=12.5V, f=175MHz
- High Efficiency: 60%typ.

## APPLICATION

For output stage of high power amplifiers in VHF band mobile radio sets.

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

(Tc=25deg.C UNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
VDSS	Drain to source voltage		30	V
VGSS	Gate to source voltage		+/-20	V
Pch	Channel dissipation	Tc=25deg.C	TBD	W
Pin	Input power	Zg=Zl=50 Ω	2.5	W
Tj	Junction Temperature		175	deg.C
Tstg	Storage temperature		-40 to +125	deg.C

Note 1: Above parameters are guaranteed independently.

## ELECTRICAL CHARACTERISTICS (Tc=25deg.C , UNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX.	
IDSS	Zero gate voltage drain current	VDS=17V, VGS=0V	-	-	200	μ A
IGSS	Gate to source leak current	VGS=10V, VDS=0V	-	-	1	μ A
VTH	Gate threshold voltage	VDS=12V, IDS=1mA	1.3	1.8	2.3	V
Pout	Output power	f=175MHz	30	38		W
η D	Drain efficiency	VDS=12.5V, Pin=1.0W, Idq=0.5A	55	60		%
	Load VSWR tolerance	VDS=15.2V, Po=30W (Pin Control) Idq=0.5A, Zg=50 Ω, Load VSWR=20:1	No destroy			—

Note : Above parameters , ratings , limits and conditions are subject to change.

—Keep safety first in your circuit designs!—

Mitsubishi Electric Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

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