



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

MITSUBISHI RF POWER MOS FET

RD06HVF1

TENTATIVE

Silicon MOSFET Power Transistor 175MHz,6W

DESCRIPTION

RD06HVF1 is a MOS FET type transistor specifically designed for VHF RF power amplifiers applications.

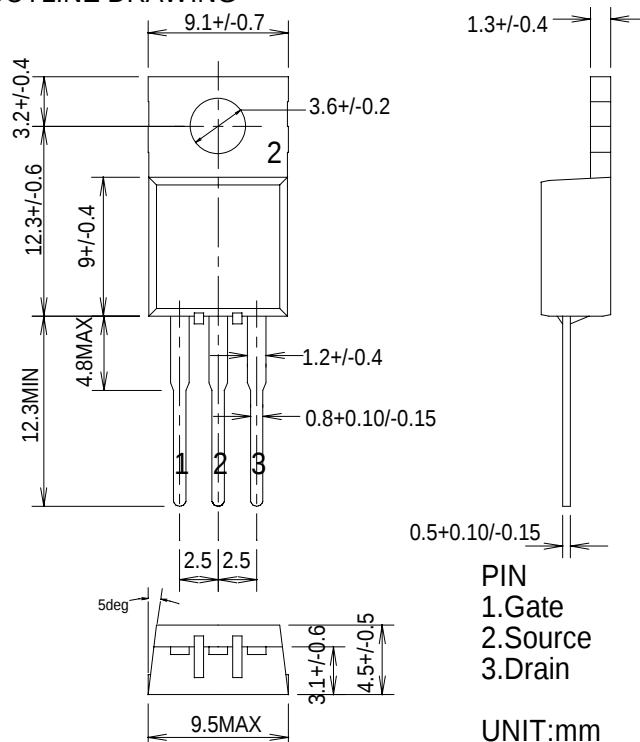
FEATURES

- High power gain:
Pout>6W, Gp>13dB @Vdd=12.5V,f=175MHz

APPLICATION

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

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

(Tc=25°C UNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	RATINGS	UNIT
Vdss	Drain to source voltage	Vgs=0V	50	V
Vgss	Gate to source voltage	Vds=0V	+/- 20	V
Pch	Channel dissipation	Tc=25°C	27.8	W
Pin	Input power	Zg=Zl=50Ω	0.6	W
ID	Drain current	-	3	A
Tch	Channel temperature	-	150	°C
Tstg	Storage temperature	-	-40 to +150	°C
Rth j-c	Thermal resistance	junction to case	4.5	°C/W

Note 1: Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS

(Tc=25°C, UNLESS OTHERWISE NOTED)

SYMBOL	PARAMETER	CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX.	
Idss	Zero gate voltage drain current	VDS=17V, VGS=0V	-	-	10	uA
Igss	Gate to source leak current	VGS=10V, VDS=0V	-	-	1	uA
VTH	Gate threshold Voltage	VDS=12V, Ids=1mA	1.9	-	4.9	V
Pout	Output power	VDD=12.5V, Pin=0.3W, f=175MHz, Idq=0.3A	6	8	-	W
ηD	Drain efficiency		55	60	-	%
	Load VSWR tolerance	VDD=15.2V, Po=6W(Pin Control) f=175MHz, Idq=0.3A, Zg=50Ω Load VSWR=20:1(All Phase)	No destroy			-

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



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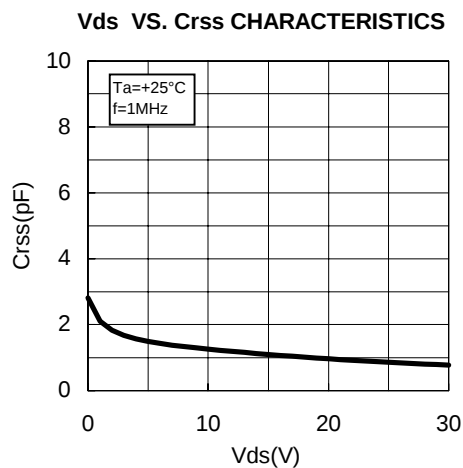
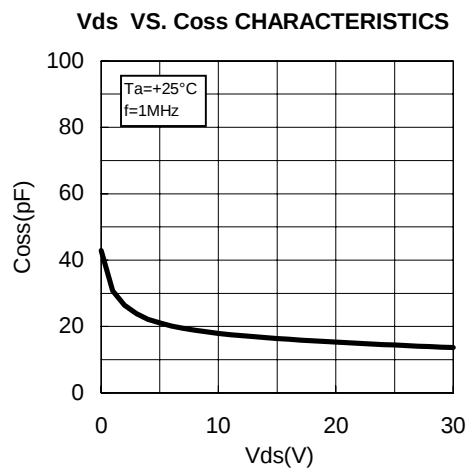
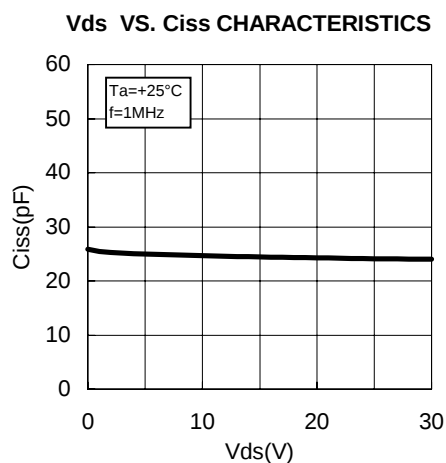
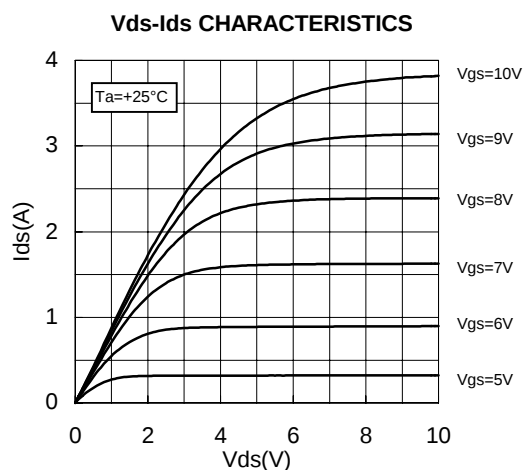
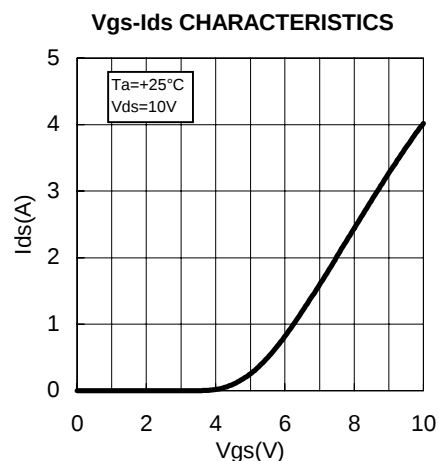
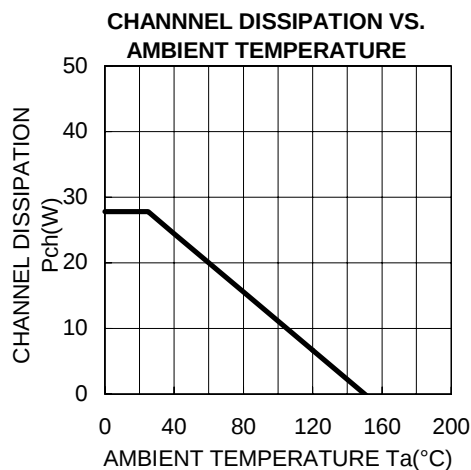
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TYPICAL CHARACTERISTICS





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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.

warning !

Do not use the device at the exceeded the maximum rating condition. In case of plastic molded devices, the exceeded maximum rating condition may cause blowout, smoldering or catch fire of the molding resin due to extreme short current flow between the drain and the source of the device. These results causes in fire or injury.