DESCRIPTION

2SK2975 is a MOS FET type transistor specifically designed for VHF/UHF power amplifiers applications.

FEATURES

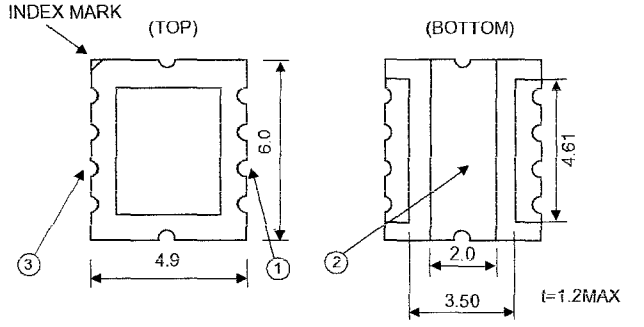
- High power gain:Gpe≥8.4dB
  @V_{DD}=9.6V,f=450MHz,Pin=30dBm
- High efficiency:55% typ.
- Source case type seramic package
  (connected internally to source)

APPLICATION

For drive stage and output stage of power amplifiers in VHF/UHF band portable radio sets.

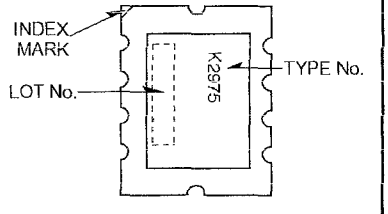
OUTLINE DRAWING

Dimensions in mm



① : DRAIN
② : SOURCE
③ : GATE

MARKING



ABSOLUTE MAXIMUM RATINGS (T_C=25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DSS}	Drain to source voltage		30	V
V_{GSS}	Gate to source voltage		±20	V
P_{ch}	Channel dissipation	T_C=25°C (Note2)	10	W
T_j	Junction temperature		175	°C
T_{stg}	Storage temperature		-40 to +110	°C

Note1: Above parameters are guaranteed independently.
2: Solder source pad on Copper Block(14×2.8×2mm)

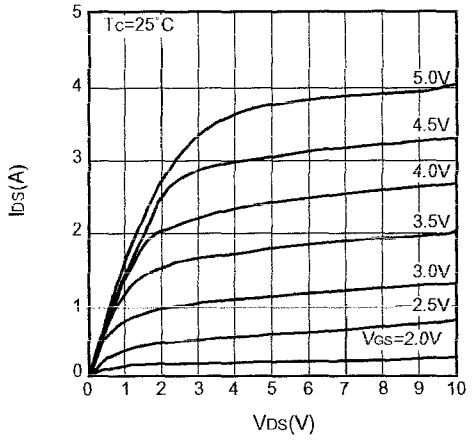
ELECTRICAL CHARACTERISTICS (T_C=25°C, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
I_{DSS}		V_{DS}=17V, V_{GS}=0V	—	—	10	μA
I_{GSS}		V_{GS}=10V, V_{DS}=0V	—	—	1	μA
V_{TH}	Threshold voltage	V_{DS}=7V, I_{DS}=1mA	1.0		1.7	V
C_{iss}		V_{GS}=10V, V_{DS}=0V,f=1MHz		45		pF
C_{oss}		V_{DS}=10V, V_{GS}=0V,f=1MHz		80		pF
P_{out}		V_{DS}=9.6V, P_{in}=1W,f=450MHz	7	8		W
h_D			50	55		%

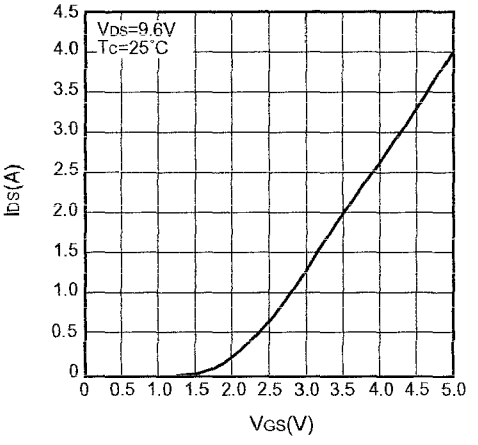
Note: Above parameters,ratings,limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

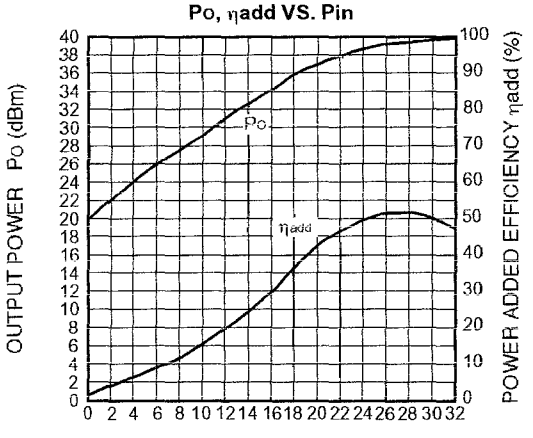
IDS VS. VDS



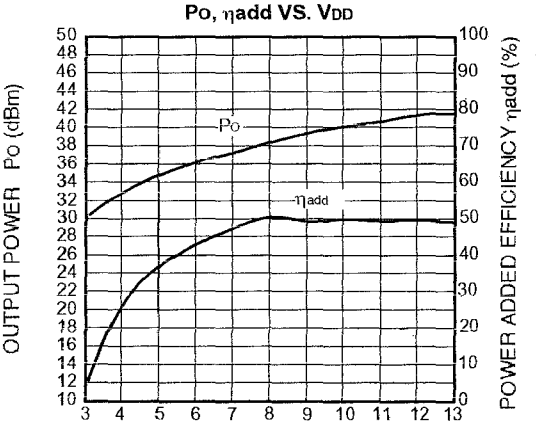
IDS VS. VGS



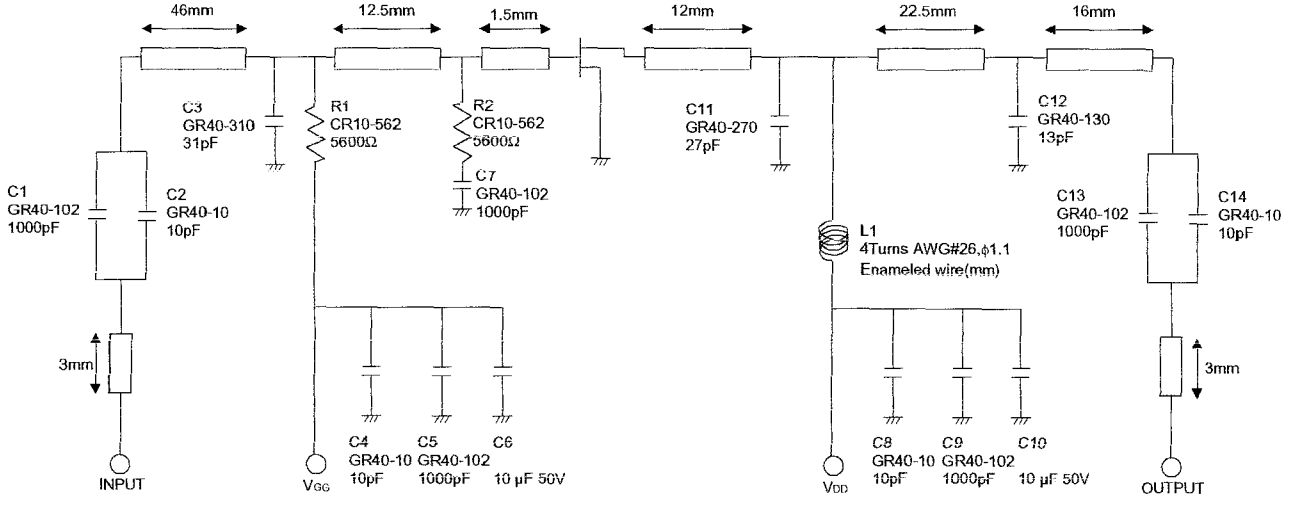
Po, ηadd VS. Pin



Po, ηadd VS. VDD



EQUIVALENT CIRCUIT



Note: Board material-glass epoxi substrate
micri strip line width=2.8mm, εr :4.8,t=1.6mm