

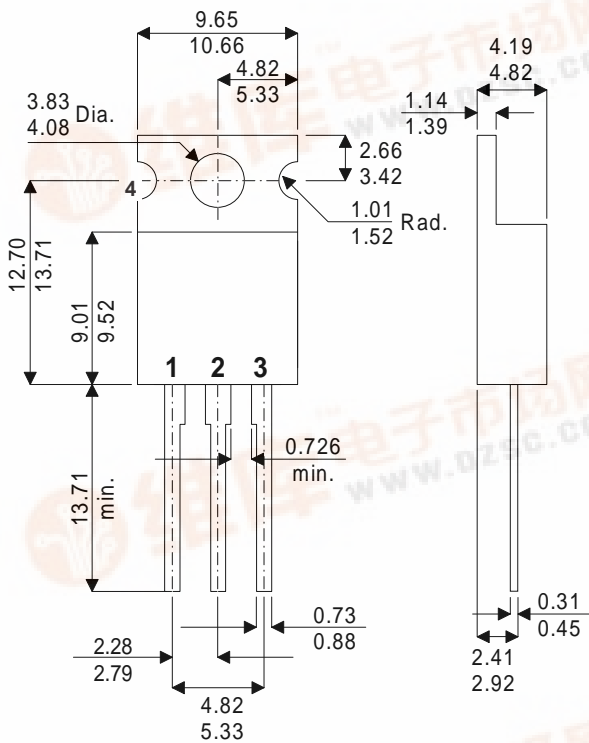


D1084UK

METAL GATE RF SILICON FET

MECHANICAL DATA

Dimensions in mm (inches)



TO-220 PLASTIC PACKAGE

PIN 1 – GATE PIN 2 – DRAIN
 PIN 3 – SOURCE PIN 4 – DRAIN

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 4W – 28V – 200MHz SINGLE ENDED

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN – 13dB MINIMUM
- SURFACE MOUNT

APPLICATIONS

- LOW COST DC to 200 MHz

ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

P_D	Power Dissipation	62.5W
BV_{DSS}	Drain – Source Breakdown Voltage	70V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	5A
T_{STG}	Storage Temperature	-65 to 125°C
	Maximum Operating Junction Temperature	150°C



ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain-Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10\text{mA}$	70			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{DS} = 28\text{V}$ $V_{GS} = 0$			1	mA
I_{GSS} Gate Leakage Current	$V_{GS} = 20\text{V}$ $V_{DS} = 0$			1	μA
$V_{GS(th)}$ Gate Threshold Voltage*	$I_D = 10\text{mA}$ $V_{DS} = V_{GS}$	1		7	V
g_{fs} Forward Transconductance*	$V_{DS} = 10\text{V}$ $I_D = 1\text{A}$	0.8			S
G_{PS} Common Source Power Gain	$V_{DS} = 28\text{V}$ $I_{DQ} = 0.1\text{A}$ $P_O = 4\text{W}$ $f = 200\text{MHz}$	13			dB
η Drain Efficiency		40			%
VSWR Load Mismatch Tolerance		20:1			—
C_{iss} Input Capacitance	$V_{DS} = 0\text{V}$ $V_{GS} = -5\text{V}$ $f = 1\text{MHz}$			60	pF
C_{oss} Output Capacitance	$V_{DS} = 28\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			30	
C_{rss} Reverse Transfer Capacitance	$V_{DS} = 28\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			2.5	

* Pulse Test: Pulse Duration = 300 μs , Duty Cycle $\leq 2\%$

THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. $2^\circ\text{C} / \text{W}$
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