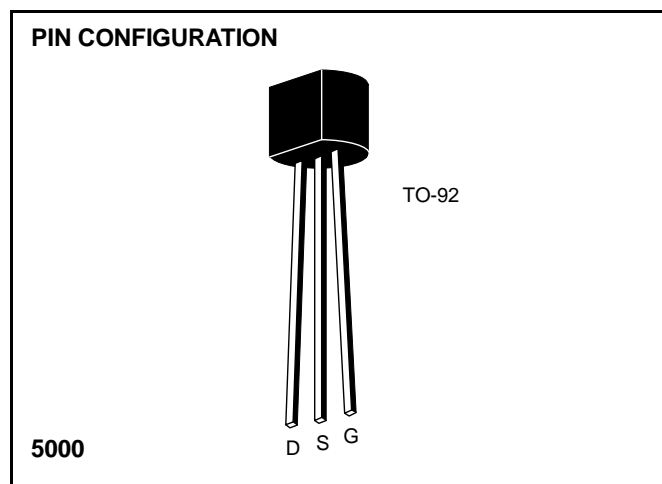


2N5484 – 2N5486

FEATURES

- Up to 400MHz Operation
- Economy Packaging
- $C_{rss} < 1.0\text{pF}$



ABSOLUTE MAXIMUM RATINGS

($T_A = 25^\circ\text{C}$ unless otherwise specified)

Drain-Gate Voltage	25V
Source Gate Voltage	25V
Drain Current	30mA
Forward Gate Current	10mA
Storage Temperature Range	-65°C to $+150^\circ\text{C}$
Operating Temperature Range	-55°C to $+135^\circ\text{C}$
Lead Temperature (Soldering, 10sec)	$+300^\circ\text{C}$
Power Dissipation	310mW
Derate above 25°C	2.82mW/ $^\circ\text{C}$

NOTE: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ORDERING INFORMATION

Part	Package	Temperature Range
2N5484-86	Plastic TO-92	-55°C to $+135^\circ\text{C}$
X2N5484-86	Sorted chips in Carriers	-55°C to $+135^\circ\text{C}$

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

SYMBOL	PARAMETER	2N5484		2N5485		2N5486		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
I_{GSS}	Gate Reverse Current		-1.0		-1.0		-1.0	nA	$V_{GS} = -20\text{V}, V_{DS} = 0$ $T_A = 100^\circ\text{C}$
			-200		-200		-200		
BV_{GSS}	Gate-Source Breakdown Voltage	-25		-25		-25		V	$I_G = -1\mu\text{A}, V_{DS} = 0$
$V_{GS(off)}$	Gate-Source Cutoff Voltage	-0.3	-3.0	-0.5	-4.0	-2.0	-6.0		$V_{DS} = 15\text{V}, I_D = 10\text{nA}$
I_{DSS}	Saturation Drain Current	1.0	5.0	4.0	10	8.0	20	mA	$V_{DS} = 15\text{V}, V_{GS} = 0$ (Note 1)
g_{fs}	Common-Source Forward Transconductance	3000	6000	3500	7000	4000	8000	μS	$V_{DS} = 15\text{V}, V_{GS} = 0$ $f = 1\text{kHz}$ $f = 100\text{MHz}$ $f = 400\text{MHz}$ $f = 100\text{MHz}$ $f = 400\text{MHz}$ $f = 100\text{MHz}$ $f = 400\text{MHz}$
g_{os}	Common-Source Output Conductance		50		60		75		
$Re(y_{fs})$	Common-Source Forward Transconductance (Note 2)	2500							
				3000		3500			
$Re(y_{os})$	Common-Source Output Conductance (Note 2)		75						
					100		100		
$Re(y_{is})$	Common-Source Input Conductance (Note 2)		100						
					1000		1000		
C_{iss}	Common-Source Input Capacitance (Note 2)		5.0		5.0		5.0	pF	$f = 1\text{MHz}$
C_{rss}	Common-Source Reverse Transfer Capacitance (Note 2)		1.0		1.0		1.0		
C_{oss}	Common-Source Output Capacitance (Note 2)		2.0		2.0		2.0		

ELECTRICAL CHARACTERISTICS (Continued) ($T_A = 25^\circ\text{C}$ unless otherwise specified)

SYMBOL	PARAMETER	2N5484		2N5485		2N5486		UNITS	TEST CONDITIONS	
		MIN	MAX	MIN	MAX	MIN	MAX			
NF	Noise Figure (Note 2)		2.5		2.5		2.5	dB	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $R_G = 1\text{M}\Omega$	$f = 1\text{kHz}$
			3.0						$V_{DS} = 15\text{V}$, $I_D = 1\text{mA}$, $R_G = 1\text{k}\Omega$	$f = 100\text{MHz}$
					2.0		2.0		$V_{DS} = 15\text{V}$, $I_D = 4\text{mA}$, $R_G = 1\text{k}\Omega$	$f = 400\text{MHz}$
G_{ps}	Common-Source Power Gain (Note 2)	16	25						$V_{DS} = 15\text{V}$, $I_D = 1\text{mA}$	$f = 100\text{MHz}$
				18	30	18	30			
				10	20	10	20		$V_{DS} = 15\text{V}$, $I_D = 4\text{mA}$	$f = 400\text{MHz}$

NOTES: 1. Pulse test required. Pulse width = $300\mu\text{s}$, duty cycle $\leq 3\%$.
2. For design reference only, not 100% tested.