Silicon N-Channel J-FET Series Chips

On-303 J-FET Chip

This On-303 J-FET is an N-channel low noise junction field effect transistor for low-frequency general-purpose designed. For example, low frequency amplifiers, constant current supplies, and impedance conversion, etc.

■ FEATURES

Low noise-figure (NF).

High gate to drain voltage.

High input resistor

Low leakage.

■ APPLICATIONS

Potentiometers.

Sensors.

Analog switches.

Microphones.

Audio devices

■ ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		50	V
Gate-to-Drain Voltage	V_{GDS}		-50	V
Gate Current	IG		10	mA
Drain Current	ID		20	mA
Allowable Power Dissipation	PD		200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to+150	°C

Test Condition @ Ta = 25° C

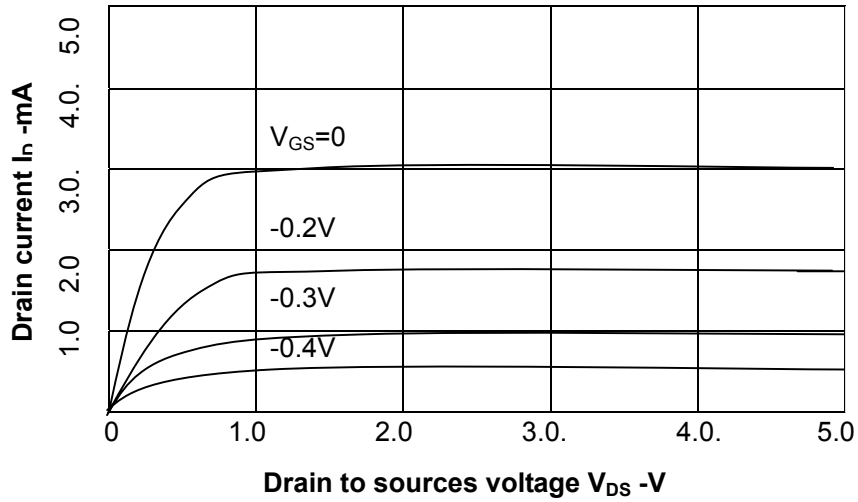
■ ELECTRICAL CHARACTERISTICS

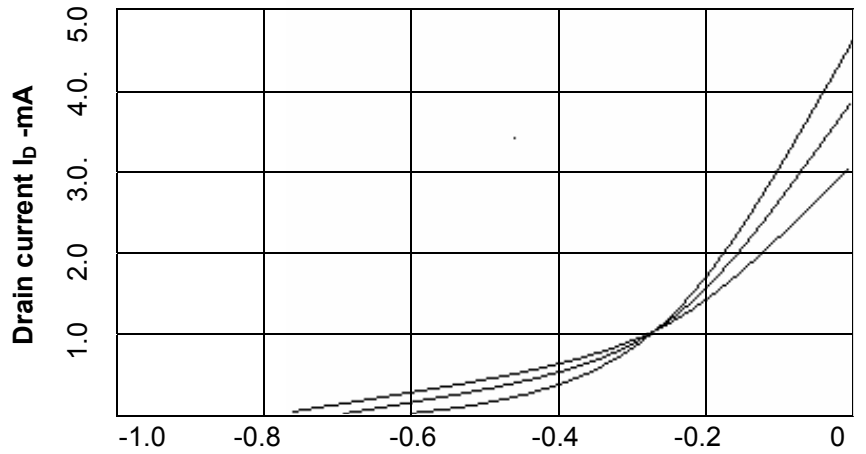
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain	$V_{(BR)gds}$	I_G=–10μA	-30			V
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=–20V			–1.0	nA
Zero-Gate Voltage Drain Current	I_{DSS}^{*}	V_{DS}=10V, V_{GS} =0	0.6*		5.0*	mA
Cutoff Voltage	V_{GS}(off)	V_{DS}=10V, I_D=1μA		–1	-4	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V,V_{GS}=0, f=1MHz	2.5	6.0		mS
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0,f=1MHz		5		pF
Reverse Transfer Capacitance	C_{rss}	V_{DS}=10V,V_{GS}=0,f=1MHz		1.5		pF
Drain-to-Source ON Resistance	$R_{DS(on)}$	V_{DS}=10mV,$V_{GS=0}$		250		Ω

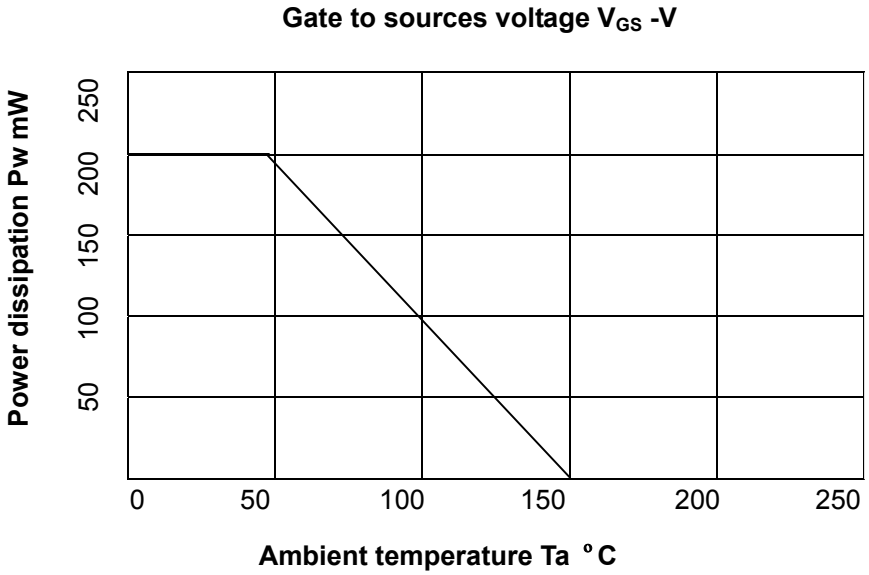
Test Condition @ Ta=25°C±3

Note : The 2SK303 is classified by I_{DSS} as follows (unit : mA). I_{DSS} rank : 1,2, 3, 4, 5

■ MAIN ELECTRICAL CURVES






Gate to sources voltage V_{GS} -V
Power dissipation Pw mW
250
200
150
100
50
0
50
100
150
200
250
Ambient temperature Ta °C