Ordering number: EN 1790B

SANYO

No.1790B

2SK546

N-Channel Junction Silicon FET

Impedance Converter Applications

Applications

- Impedance conversion
- Infrared sensor

Features

- Low I_{GSS}
- Small c_{iss}

Absolute Maximum Ratings at Ta=25°C

			unit
Drain to Source Voltage	V_{DSS}	40	V
Gate to Drain Voltage	V_{GDS}	-40	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Allowable Power Dissipation	P_D	100	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{stg}	-55 to +125	°C

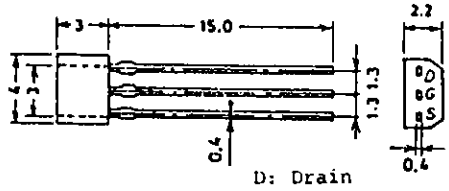
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Gate to Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=-10μA, V_{DS}=0	-40			V
Gate Cutoff Current	I_{GSS}	V_{GS}=-20V, V_{DS}=0			-500	pA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1μA		-1.5	-4.0	V
Drain Current	I_{DSS}	V_{DS}=10V, V_{GS}=0	30*		300*	μA
Forward Transfer Admittance	$\|Yfs\|$	V_{DS}=10V, V_{GS}=0, f=1KHz	0.05	0.13		mS
Input Capacitance	c_{iss}	V_{DS}=10V, V_{GS}=0, f=1MHz		1.9		pF
Reverse Transfer Capacitance	c_{rss}	V_{DS}=10V, V_{GS}=0, f=1MHz		0.7		pF

* The 2SK546 is classified by I_{DSS} as follows (unit:μA):

30 I 80	60 J 180	150 K 300

Package Dimensions 2034
(unit: mm)



D: Drain
G: Gate
S: Source

SANYO: SPA

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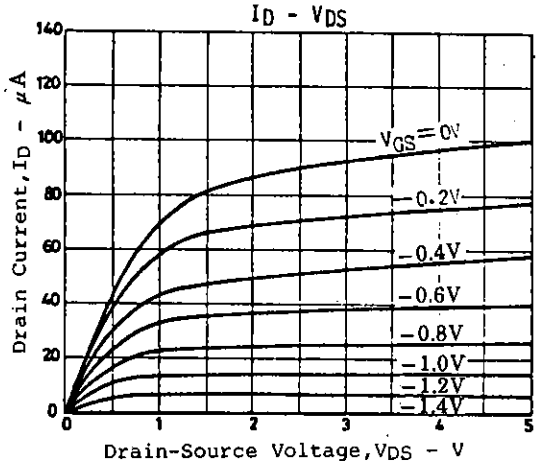
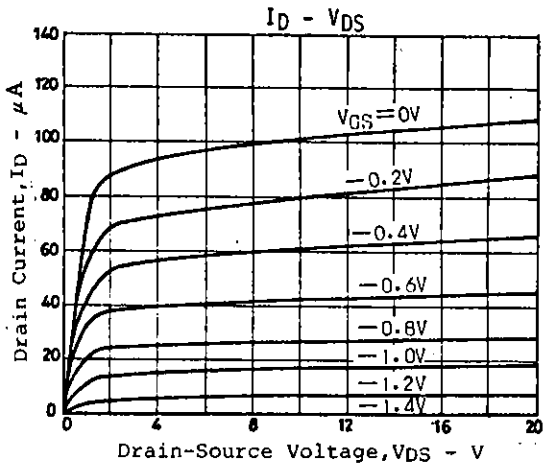
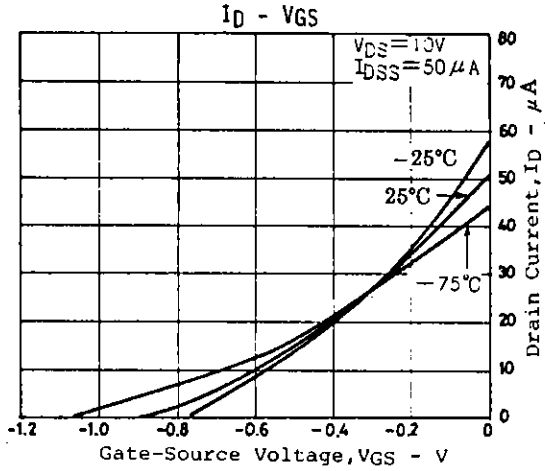
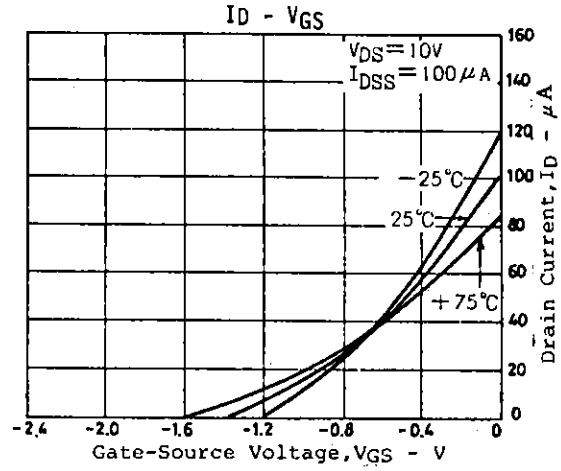
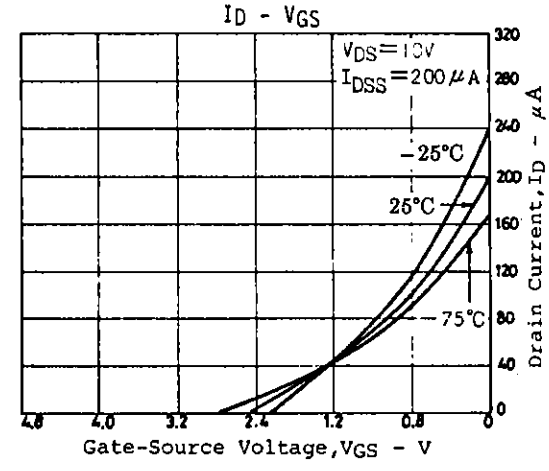
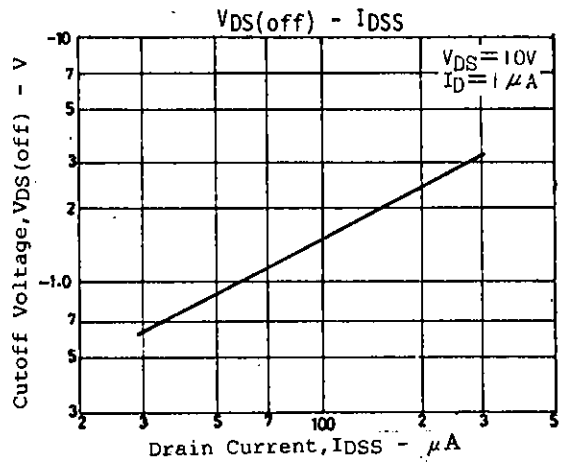

I_D - V_{DS}
Drain Current, I_D - μA
V_{GS}=0V
-0.2V
-0.4V
-0.6V
-0.8V
-1.0V
-1.2V
-1.4V
Drain-Source Voltage, V_{DS} - V

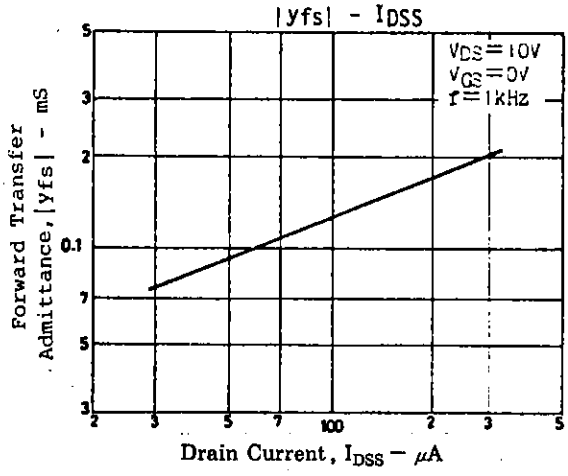

I_D - V_{DS}
Drain Current, I_D - μA
V_{GS}=0V
-0.2V
-0.4V
-0.6V
-0.8V
-1.0V
-1.2V
-1.4V
Drain-Source Voltage, V_{DS} - V

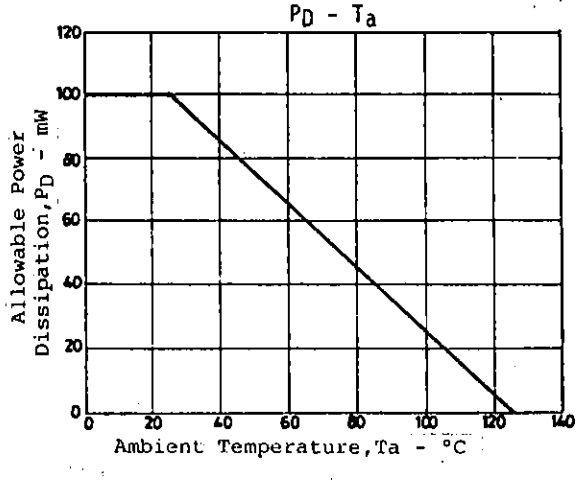

I_D - V_{GS}
V_{DS}=10V
I_{DSS}=50μA
-25°C
25°C
75°C
Drain Current, I_D - μA
Gate-Source Voltage, V_{GS} - V


I_D - V_{GS}
V_{DS}=10V
I_{DSS}=100μA
-25°C
25°C
+75°C
Drain Current, I_D - μA
Gate-Source Voltage, V_{GS} - V


I_D - V_{GS}
V_{DS}=10V
I_{DSS}=200μA
-25°C
25°C
75°C
Drain Current, I_D - μA
Gate-Source Voltage, V_{GS} - V


$V_{DS(off)}$ - I_{DSS}
V_{DS}=10V
I_D=1μA
Cutoff Voltage, $V_{DS(off)}$ - V
Drain Current, I_{DSS} - μA


|yfs| - I_{DSS}
V_{DS}=10V
V_{GS}=0V
f=1kHz
Forward Transfer Admittance, |yfs| - mS
Drain Current, I_{DSS} - μA


P_D - T_a
Allowable Power Dissipation, P_D - mW
Ambient Temperature, Ta - °C