Ordering number:EN1790B

N-Channel Junction Silicon FET

2SK546

Impedance Converter Applications

Applications

· Impedance conversion.
· Infrared sensor.

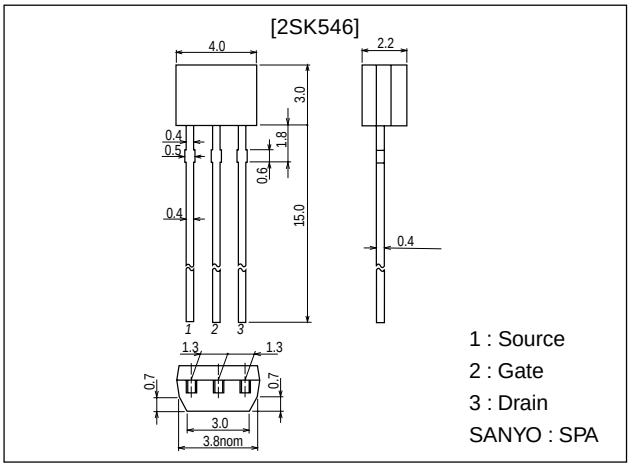
Features

· Low I_{GSS}.
· Small Ciss.

Package Dimensions

unit:mm

2034A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	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	Tj		125	˚C
Storage Temperature	Tstg		–55 to +125	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=–10μA, V_{DS}=0	–40			V
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=–20V, V_{DS}=0			–500	pA
Zero-Gate Voltage Drain Current	I_{DSS}*	V_{DS}=10V, V_{GS}=0	30*		300*	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D=1μA		–1.5	–4.0	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, V_{GS}=0, f=1kHz	0.05	0.13		mS
Input Capacitance	Ciss	V_{DS}=10V, V_{GS}=0, f=1MHz		1.9		pF
Reverse Transfer Capacitance	Crss	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

SANYO Electric Co.,Ltd. Semiconductor Company
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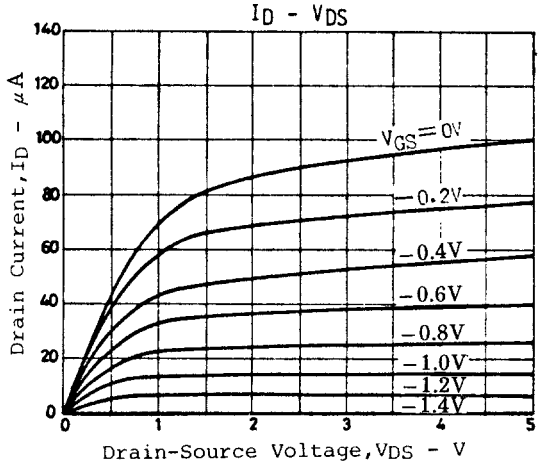
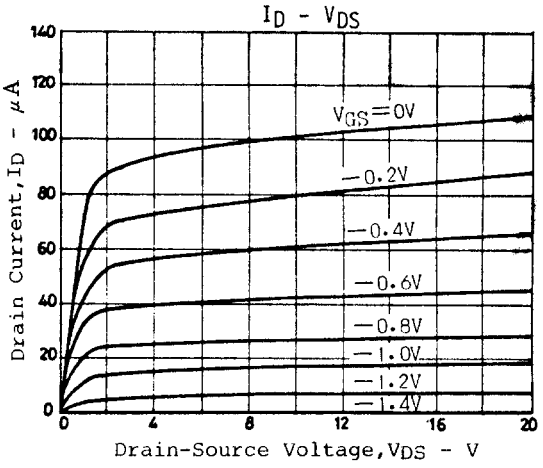
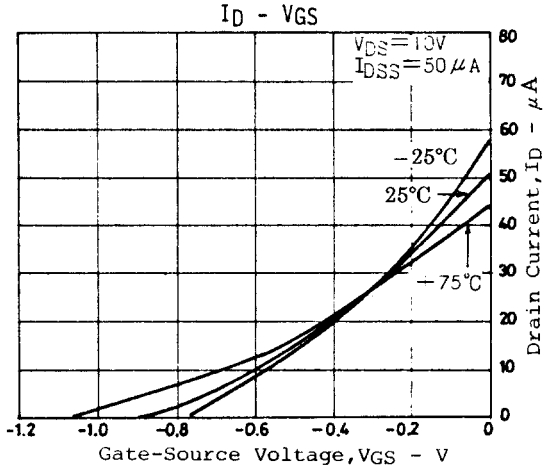
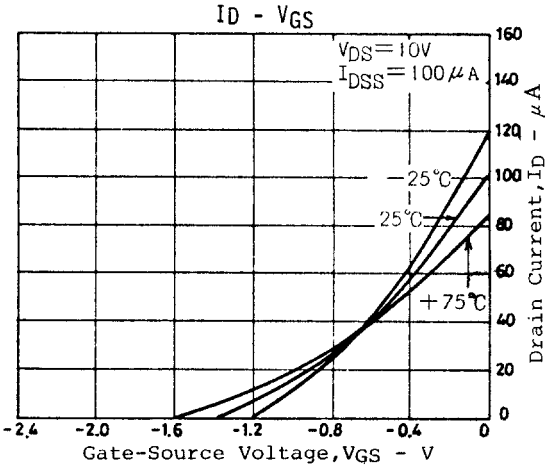
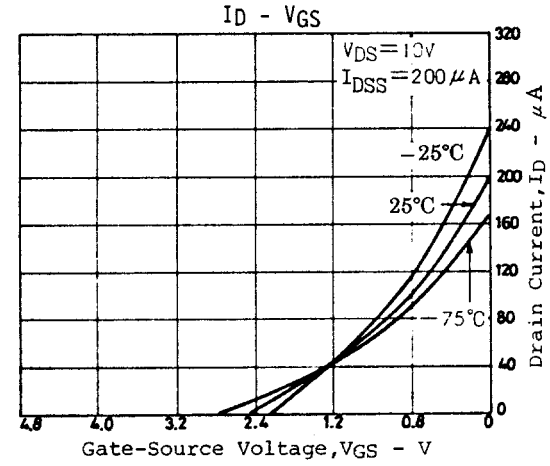
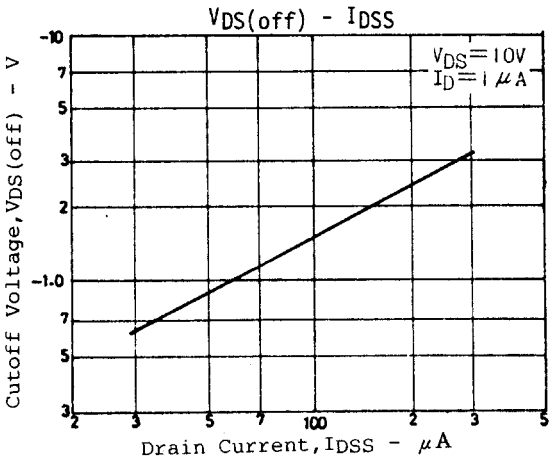

ID - VDS
Drain Current, ID - μA
VGS=0V
-0.2V
-0.4V
-0.6V
-0.8V
-1.0V
-1.2V
-1.4V
Drain-Source Voltage, VDS - V

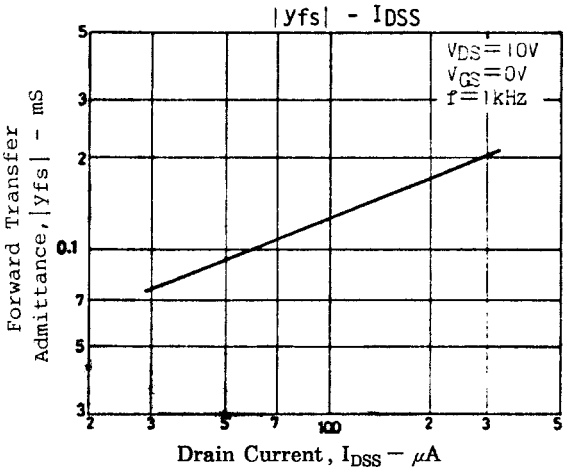

ID - VDS
Drain Current, ID - μA
VGS=0V
-0.2V
-0.4V
-0.6V
-0.8V
-1.0V
-1.2V
-1.4V
Drain-Source Voltage, VDS - V

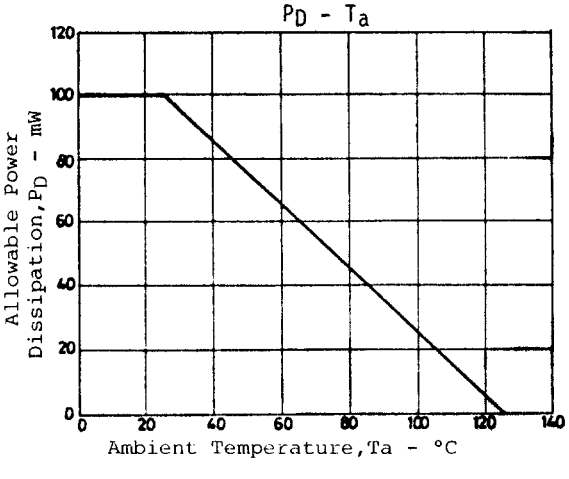

ID - VGS
VDS=10V
IDSS=50μA
-25°C
25°C
75°C
Drain Current, ID - μA
Gate-Source Voltage, VGS - V


ID - VGS
VDS=10V
IDSS=100μA
-25°C
25°C
+75°C
Drain Current, ID - μA
Gate-Source Voltage, VGS - V


ID - VGS
VDS=10V
IDSS=200μA
-25°C
25°C
75°C
Drain Current, ID - μA
Gate-Source Voltage, VGS - V


VDS(off) - IDSS
VDS=10V
ID=1μA
Cutoff Voltage, VDS(off) - V
Drain Current, IDSS - μA


|yfs| - IDSS
VDS=10V
VGS=0V
f=1kHz
Forward Transfer Admittance, |yfs| - mS
Drain Current, IDSS - μA


PD - Ta
Allowable Power Dissipation, PD - mW
Ambient Temperature, Ta - °C