

**2SK545**

## Impedance Converter Applications

### Applications

- Impedance converter applications.
- Infrared sensor.

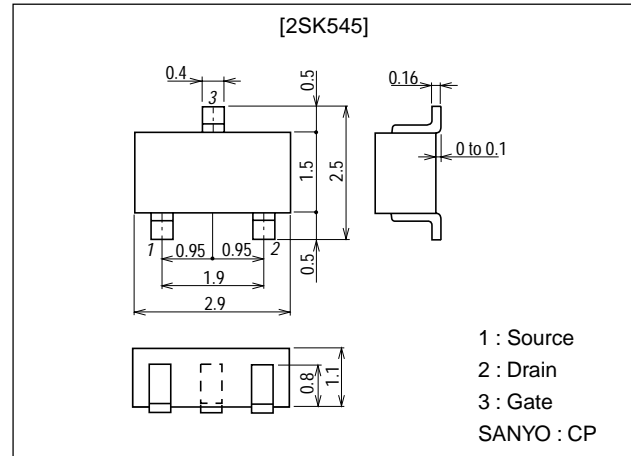
### Features

- Small  $I_{GSS}$ .
- Small  $C_{iss}$ .
- Ultracompact package permitting 2SK545-applied sets to be compact.

### Package Dimensions

unit:mm

2050A



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

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
Power Dissipation	$P_D$		125	mW
Junction Temperature	$T_J$		125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_D = -10\mu\text{A}$ , $V_{DS} = 0$	-40			V
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS} = -20\text{V}$ , $V_{DS} = 0$			-500	pA
Zero-Gate Voltage Drain Current	$I_{DSS}^*$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$	30*		300*	$\mu\text{A}$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$ , $I_D = 1\mu\text{A}$		-1.5	-4.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{kHz}$	0.05	0.13		mS
Input Capacitance	$C_{iss}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$		1.7		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$		0.7		pF

\* The 2SK545 is classified by  $I_{DSS}$  as follows (unit :  $\mu\text{A}$ ) :

(Note) Marking : B

$I_{DSS}$  rank : 10, 11, 12

30	10	80	60	11	180	150	12	300
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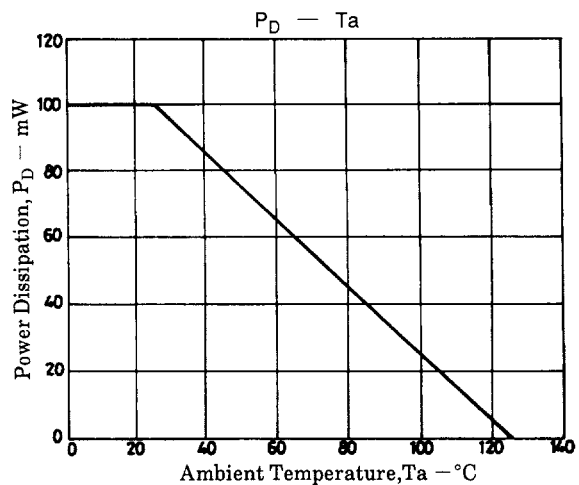
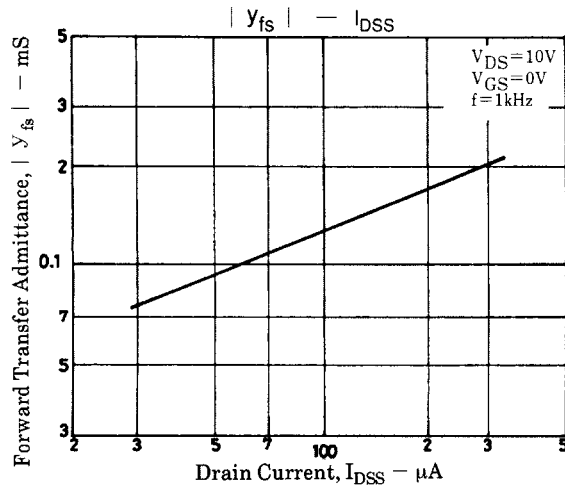
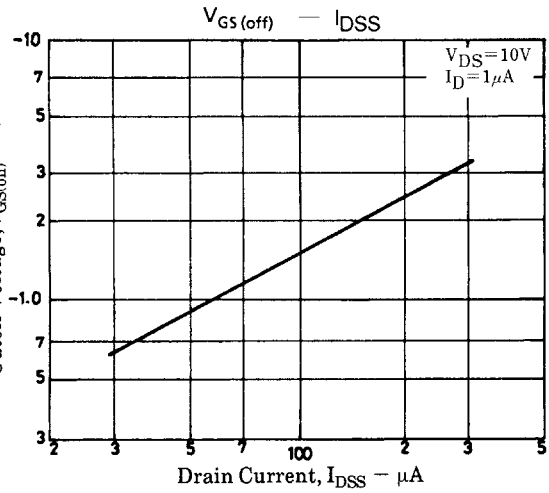
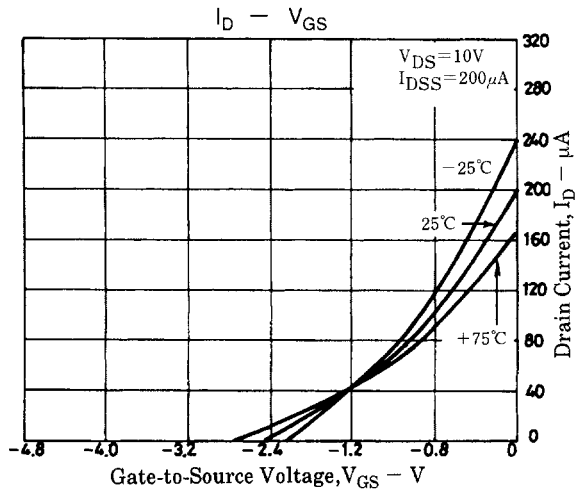
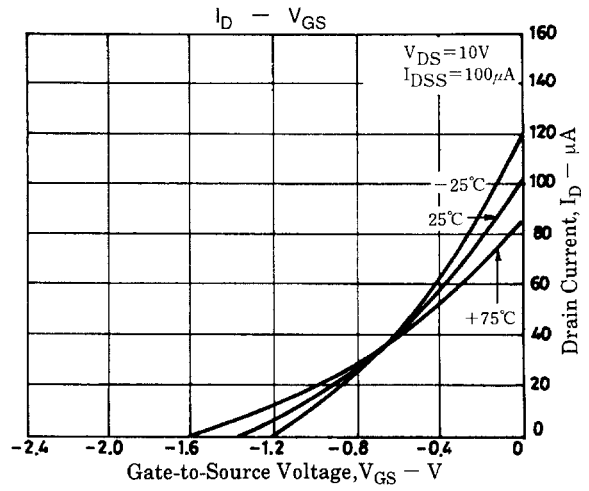
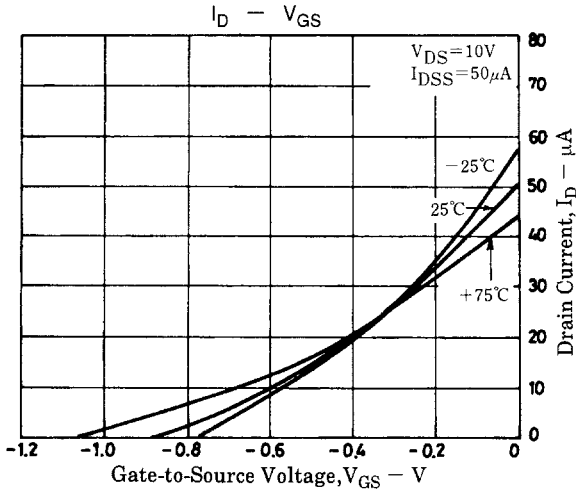
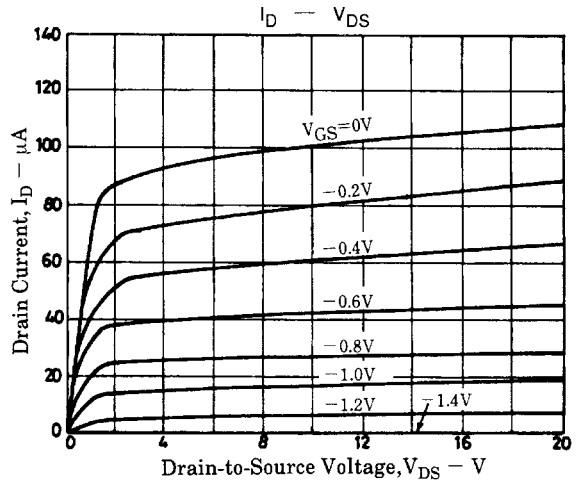
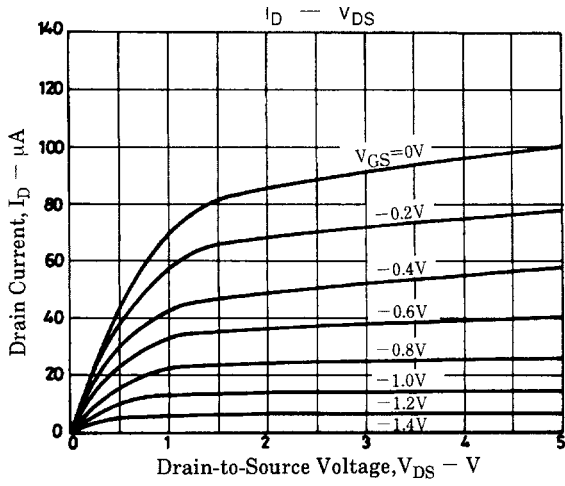
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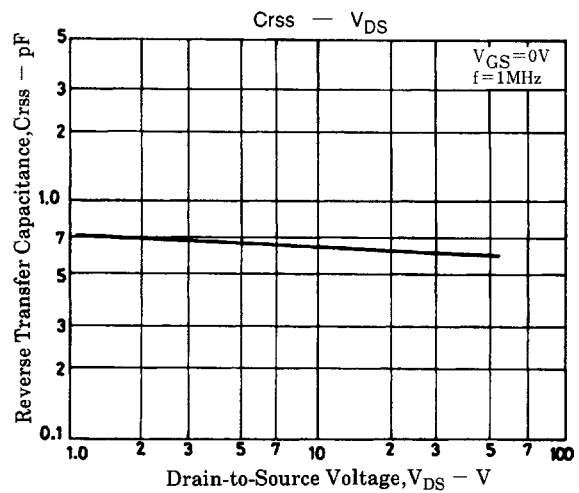
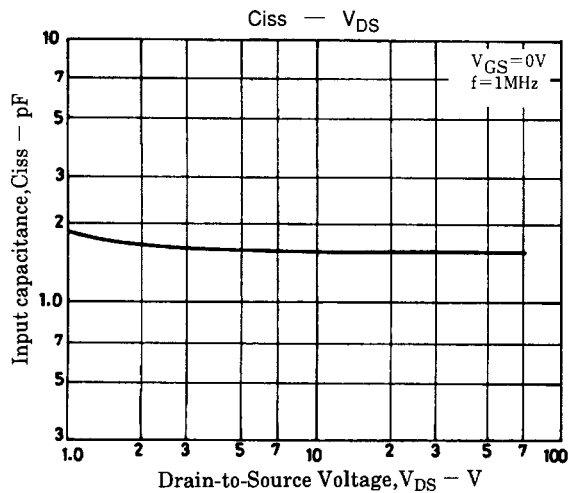
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# 2SK545



## 2SK545



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