

|   |          |                                |
|---|----------|--------------------------------|
| <b>SANYO</b>                            | No.1790B | <b>2SK546</b>                  |
|   |          | N-Channel Junction Silicon FET |
| <b>Impedance Converter Applications</b> |          |                                |

**Applications**

- Impedance conversion
- Infrared sensor

**Features**

- Low  $I_{GSS}$
- Small  $C_{iss}$

**Absolute Maximum Ratings at  $T_a=25^\circ C$**

|                             |           | 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 $^\circ C$         |
| Storage Temperature         | $T_{stg}$ | -55 to +125 $^\circ C$ |

**Electrical Characteristics at  $T_a=25^\circ C$**

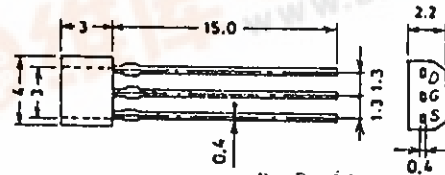
|                                 |               |                                | min  | typ  | max  | unit    |
|---------------------------------|---------------|--------------------------------|------|------|------|---------|
| Gate to Drain Breakdown Voltage | $V(BR)_{GDS}$ | $I_G=-10\mu A, V_{DS}=0$       | -40  |      |      | V       |
| Gate Cutoff Current             | $I_{GSS}$     | $V_{GS}=-20V, V_{DS}=0$        |      |      | -500 | pA      |
| Cutoff Voltage                  | $V_{GS(off)}$ | $V_{DS}=10V, I_D=1\mu A$       | -1.5 | -4.0 |      | V       |
| Drain Current                   | $I_{DSS}$     | $V_{DS}=10V, V_{GS}=0$         | 30*  |      | 300* | $\mu A$ |
| Forward Transfer Admittance     | $ Y_{fs} $    | $V_{DS}=10V, V_{GS}=0, f=1KHz$ | 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: $\mu A$ ):

|    |   |    |    |   |     |     |   |     |
|----|---|----|----|---|-----|-----|---|-----|
| 30 | I | 80 | 60 | J | 180 | 150 | K | 300 |
|----|---|----|----|---|-----|-----|---|-----|

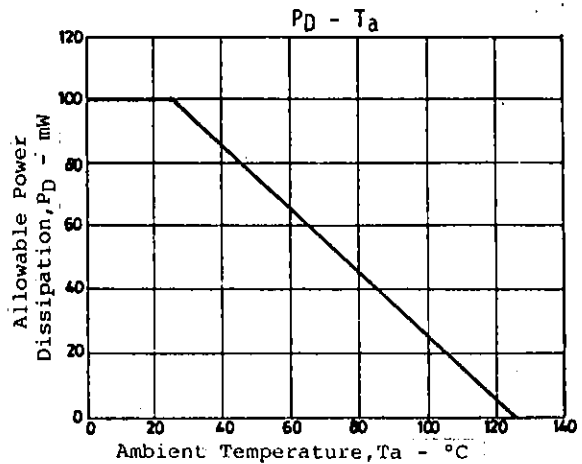
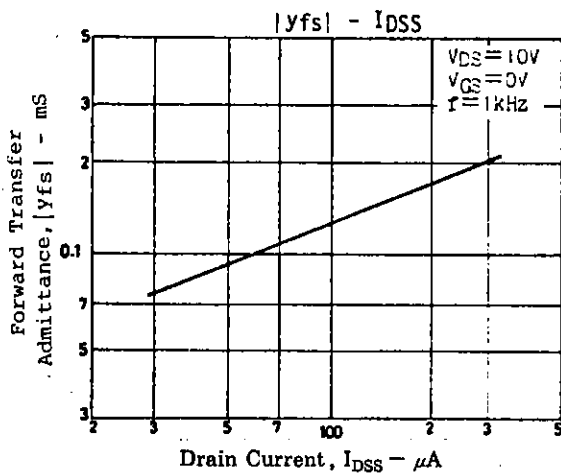
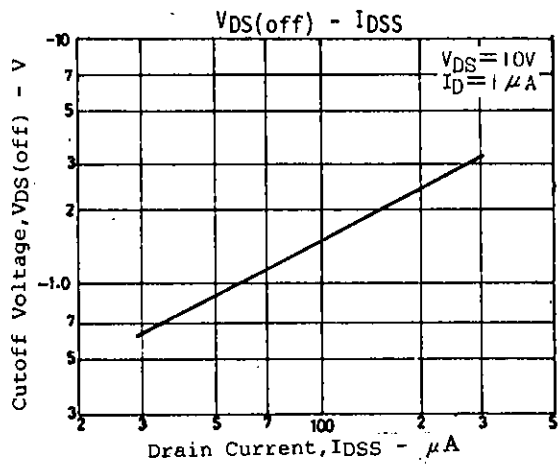
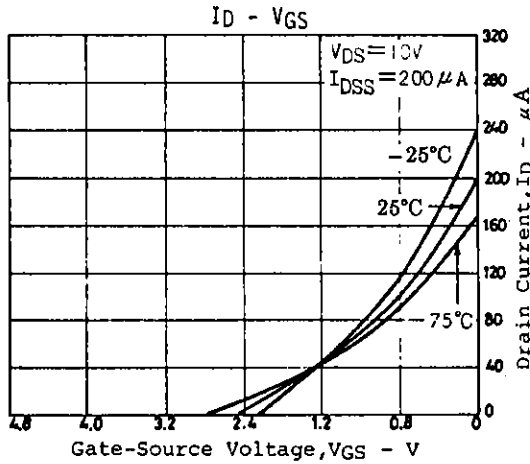
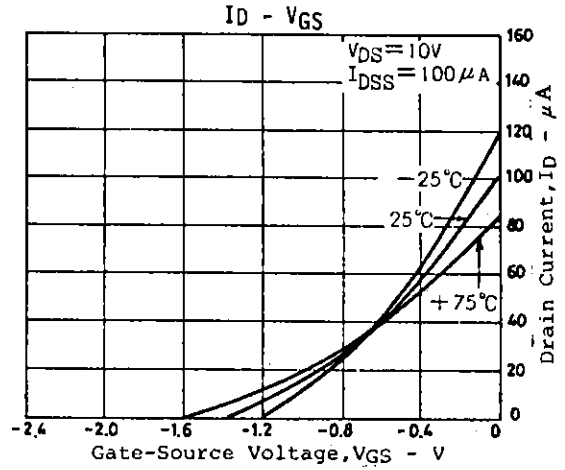
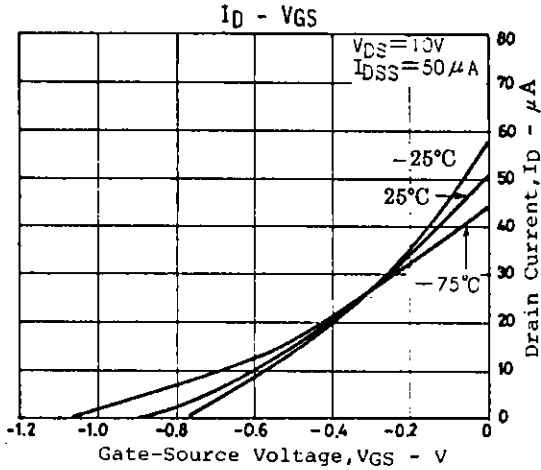
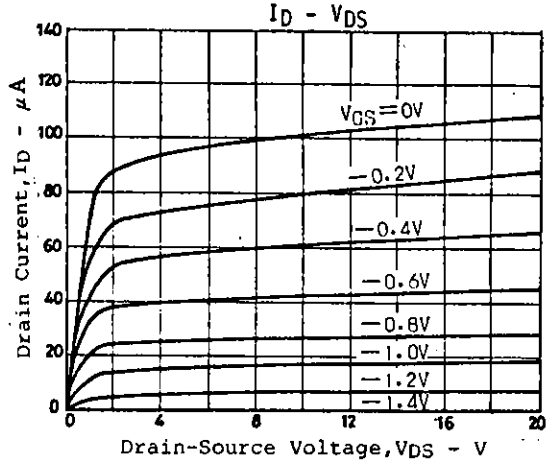
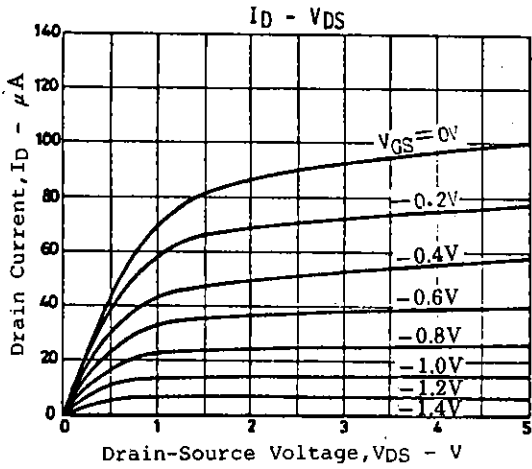
**Package Dimensions 2034**

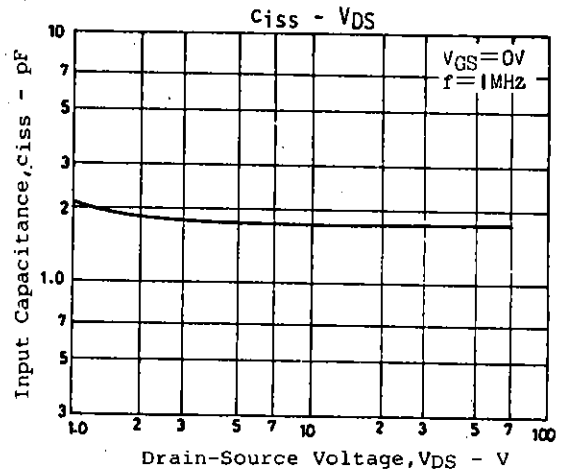
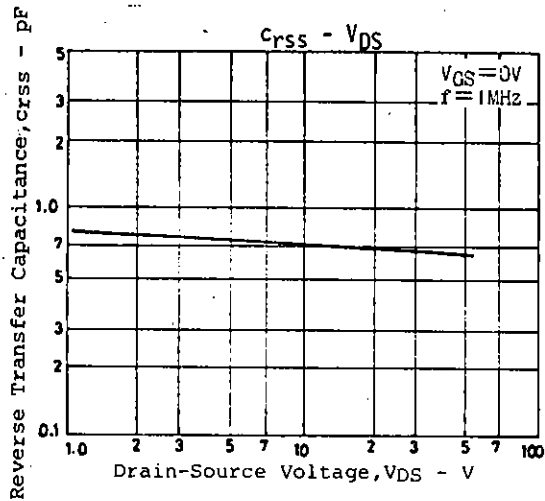
(unit: mm)



D: Drain  
G: Gate  
S: Source  
SANYO: SPA







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