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2SK2380

Silicon N-Channel Junction FET

For impedance conversion in low frequency

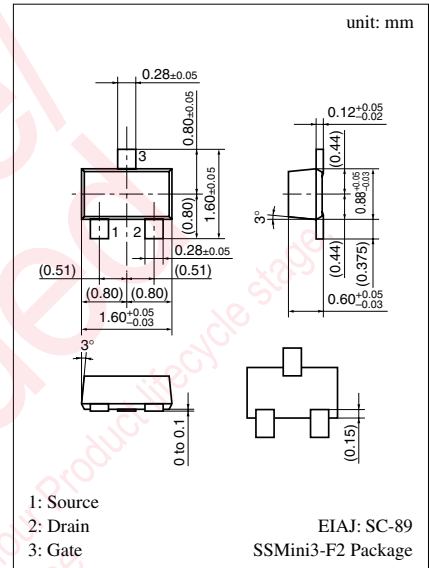
For infrared sensor

■ Features

- Low gate to source leakage current, I_{GSS}
- Small capacitance of C_{iss} , C_{oss} , C_{rss}
- SS-mini type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Ratings | Unit |
|-----------------------------|-----------|-------------|------------------|
| Gate to Drain voltage | V_{GDO} | -40 | V |
| Gate to Source voltage | V_{GSO} | -40 | V |
| Drain current | I_D | ± 1 | mA |
| Gate current | I_G | 10 | mA |
| Allowable power dissipation | P_D | 125 | mW |
| Channel temperature | T_{ch} | 125 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +125 | $^\circ\text{C}$ |



Marking Symbol (Example): EB

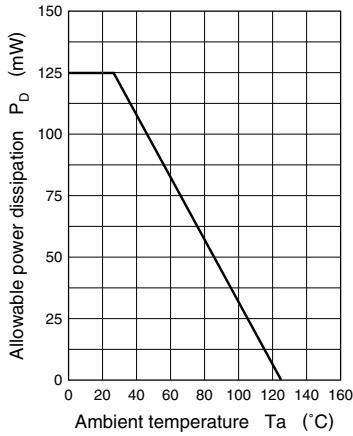
■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|--|-------------|--|------|------|------|---------------|
| Drain to Source cut-off current | I_{DSS}^* | $V_{DS} = 10\text{V}, V_{GS} = 0$ | 50 | | 200 | μA |
| Gate to Source leakage current | I_{GSS} | $V_{GS} = -20\text{V}, V_{DS} = 0$ | | | -0.5 | nA |
| Gate to Drain voltage | V_{DS} | $I_G = -10\mu\text{A}, V_{DS} = 0$ | -40 | | | V |
| Gate to Source cut-off voltage | V_{GSC} | $V_{DS} = 10\text{V}, I_D = 1\mu\text{A}$ | | -1.3 | -3 | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{kHz}$ | 0.05 | | | mS |
| Input capacitance (Common Source) | C_{iss} | $V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$ | | 1 | | pF |
| Output capacitance (Common Source) | C_{oss} | | | 0.4 | | pF |
| Reverse transfer capacitance (Common Source) | C_{rss} | | | 0.4 | | pF |

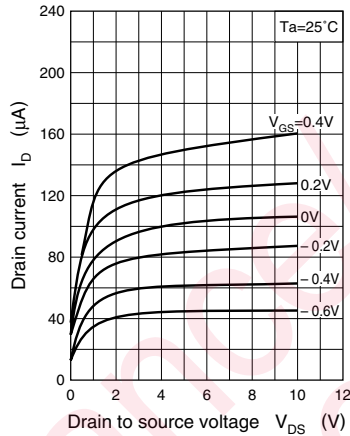
* I_{DSS} rank classification

| Runk | Q | R | S |
|----------------|-----------|-----------|------------|
| I_{DSS} (mA) | 50 to 100 | 70 to 130 | 100 to 200 |
| Marking Symbol | EBQ | EBR | EBS |

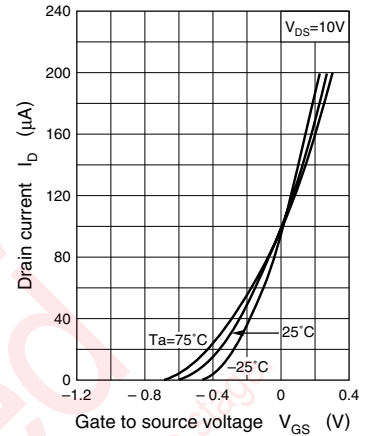
$P_D - T_a$



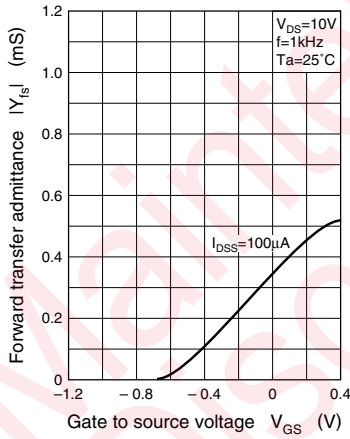
$I_D - V_{DS}$



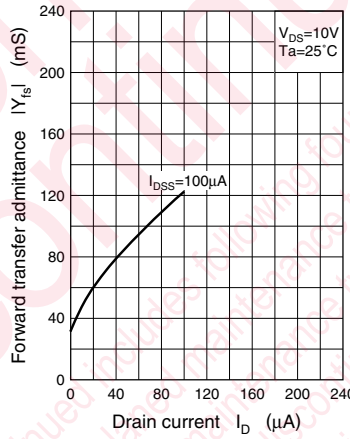
$I_D - V_{GS}$



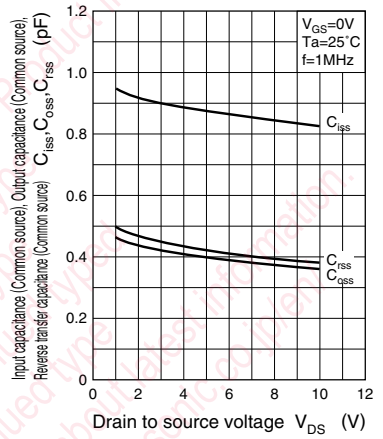
$|Y_{fs}| - V_{GS}$



$|Y_{fs}| - I_D$



$C_{iss}, C_{oss}, C_{rss} - V_{DS}$



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