

## 8. INDUSTRIAL APPLICATIONS FETs

### (1) CHOPPER SWITCHING APPLICATIONS

#### » JUNCTION FET «

| Application                     | Type No.  |           | V <sub>GDS</sub><br>(V) | I <sub>G</sub><br>(mA) | P <sub>D</sub><br>(mW) | T <sub>J</sub><br>(°C) | IDSS*                    |                        | Main Electrical Characteristics                                                        |  |  |  | PACKAGE |
|---------------------------------|-----------|-----------|-------------------------|------------------------|------------------------|------------------------|--------------------------|------------------------|----------------------------------------------------------------------------------------|--|--|--|---------|
|                                 | N-Channel | P-Channel |                         |                        |                        |                        | I <sub>DSS</sub><br>(mA) | V <sub>DS</sub><br>(V) |                                                                                        |  |  |  |         |
| General Purpose                 | 2SK11     |           | -20                     | 10                     | 100                    | 150                    | 0.3~6.5                  | 10                     | I <sub>Yfs</sub> =0.7~3.2mS @V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1KHz          |  |  |  | TO-17   |
| Low Noise                       | 2SK12     |           | -20                     | 10                     | 100                    | 150                    | 0.45~5.0                 | 10                     | I <sub>Yfs</sub> =0.8~3.2mS @V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1KHz          |  |  |  | TO-17   |
| Low Noise                       | 2SK15     |           | -20                     | 10                     | 100                    | 150                    | 0.45~5.0                 | 10                     | NF=3dBMAX. @V <sub>DS</sub> =10V, I <sub>D</sub> =0.45mA, R <sub>g</sub> =10kΩ, f=1KHz |  |  |  | TO-17   |
| High I <sub>Yfs</sub> Low Noise | 2SK112    |           | -50                     | 10                     | 250                    | 150                    | 1.2~9.0                  | 15                     | NF=2dBMAX. @V <sub>DS</sub> =15V, I <sub>D</sub> =1mA, R <sub>g</sub> =1KΩ, f=1KHz     |  |  |  | TO-18   |
| Controlled Resistor             | 2SK113-R  |           | -50                     | 10                     | 250                    | 150                    | (Note) 5~30              | 20                     | R <sub>ON</sub> =100ΩMAX. @V <sub>GS</sub> =0, I <sub>D</sub> =1mA                     |  |  |  | TO-18   |
| Switching, Chopper              | 2SK113-O  |           | -50                     | 10                     | 250                    | 150                    | (Note) 25~75             | 20                     | R <sub>ON</sub> =60ΩMAX. @V <sub>GS</sub> =0, I <sub>D</sub> =1mA                      |  |  |  | TO-18   |
| Analog Switch, Chopper          | 2SK113-Y  |           | -50                     | 10                     | 150                    | 150                    | (Note) 50~150            | 20                     | R <sub>ON</sub> =30ΩMAX. @V <sub>GS</sub> =0, I <sub>D</sub> =1mA                      |  |  |  | TO-18   |

\* I<sub>DSS</sub> Classified. (Note) Pulsed

#### » MOS FET «

| Application       | Type No.  |           | V <sub>DSS</sub><br>(V) | V <sub>G2SS</sub><br>(V) | V <sub>G2SS</sub><br>(V) | I <sub>D</sub><br>(mA) | P <sub>D</sub><br>(mW) | T <sub>ch</sub><br>(°C) | R <sub>ON</sub><br>(Ω) | CG                      |                         |                         | PACKAGE |
|-------------------|-----------|-----------|-------------------------|--------------------------|--------------------------|------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|---------|
|                   | N-CHANNEL | P-CHANNEL |                         |                          |                          |                        |                        |                         |                        | V <sub>G1S</sub><br>(V) | V <sub>G2S</sub><br>(V) | V <sub>DS</sub><br>(mV) |         |
| Switching chopper | 3SK 38A   |           | 20                      | ±12                      | -20                      | 10                     | 200                    | 125                     | 500 MAX.               | 3                       | 0                       | 10                      | (28E1A) |
|                   |           |           |                         |                          |                          |                        |                        |                         |                        |                         |                         |                         | (28E1A) |

(Lead; Cu)

