

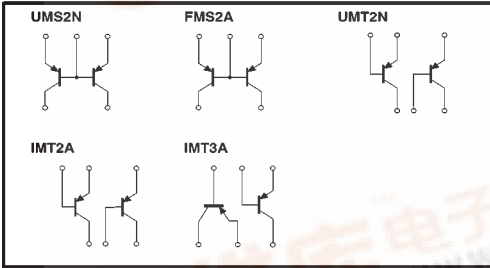
General purpose (dual transistors)

UMS2N / UMT2N / FMS2A / IMT2A / IMT3A

●Features

1) Two 2SA1037AK chips in a UMT or SMT package.

●Circuit diagrams



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|------------------|----------------------------|-------------|
| Collector-base voltage | V _{CB0} | -60 | V |
| Collector-emitter voltage | V _{CE0} | -50 | V |
| Emitter-base voltage | V _{EB0} | -6 | V |
| Collector current | I _c | 150 | mA |
| Collector power dissipation | P _c | 150 (TOTAL) 300 (TOTAL) | mW *1 *2 |
| Junction temperature | T _J | 150 | °C |
| Storage temperature | T _{stg} | -55~+150 | °C |

*1 120mW per element must not be exceeded.
 *2 200mW per element must not be exceeded.

●Package, marking, and packaging specifications

| Part No. | UMS2N | UMT2N | FMS2A | IMT2A | IMT3A |
|------------------------------|-------|-------|-------|-------|-------|
| Package | UMT5 | UMT6 | SMT5 | SMT6 | SMT6 |
| Marking | S2 | T2 | S2 | T2 | T3 |
| Code | TR | TR | T148 | T108 | T108 |
| Basic ordering unit (pieces) | 3000 | 3000 | 3000 | 3000 | 3000 |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|----------------------|------|------|------|------|--|
| Collector-base breakdown voltage | BV _{CB0} | -60 | — | — | V | I _c =-50 μA |
| Collector-emitter breakdown voltage | BV _{CE0} | -50 | — | — | V | I _c =-1mA |
| Emitter-base breakdown voltage | BV _{EB0} | -6 | — | — | V | I _E =-50 μA |
| Collector cutoff current | I _{cB0} | — | — | -0.1 | μA | V _{CB} =-60V |
| Emitter cutoff current | I _{EB0} | — | — | -0.1 | μA | V _{EB} =-6V |
| Collector-emitter saturation voltage | V _{CE(sat)} | — | — | -0.5 | V | I _c /I _E =-50mA/-5mA |
| DC current transfer ratio | h _{FE} | 120 | — | 560 | — | V _{CE} =-6V, I _c =-1mA |
| Transition frequency | f _r | — | 140 | — | MHz | V _{CE} =-12V, I _E =2mA, f=100MHz * |
| Output capacitance | C _{ob} | — | 4 | 5 | pF | V _{CE} =-12V, I _E =0A, f=1MHz |

* Transition frequency of the device.

(94S-366-A032)

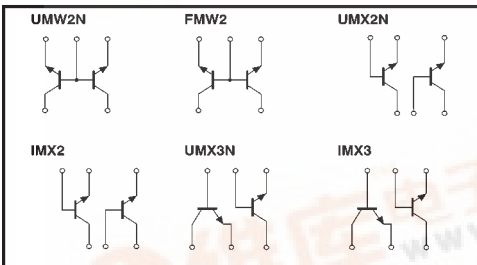
General purpose (dual transistors)

UMW2N / UMX2N / UMX3N / FMW2 / IMX2 / IMX3

●Features

1) Two 2SC2412AK chips in a UMT or SMT package.

●Circuit diagrams



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|------------------|----------------------------|-------------|
| Collector-base voltage | V _{CB0} | 60 | V |
| Collector-emitter voltage | V _{CE0} | 50 | V |
| Emitter-base voltage | V _{EB0} | 7 | V |
| Collector current | I _c | 150 | mA |
| Collector power dissipation | P _c | 150 (TOTAL) 300 (TOTAL) | mW *1 *2 |
| Junction temperature | T _J | 150 | °C |
| Storage temperature | T _{stg} | -55~+150 | °C |

*1 120mW per element must not be exceeded.
 *2 200mW per element must not be exceeded.

●Package, marking, and packaging specifications

| Part No. | UMW2N | UMX2N | UMX3N | FMW2 | IMX2 | IMX3 |
|------------------------------|-------|-------|-------|------|------|------|
| Package | UMT5 | UMT6 | UMT6 | SMT5 | SMT6 | SMT6 |
| Marking | W2 | X2 | X3 | W2 | X2 | X3 |
| Code | TR | TR | TR | T148 | T108 | T108 |
| Basic ordering unit (pieces) | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|----------------------|------|------|------|------|--|
| Collector-base breakdown voltage | BV _{CB0} | 60 | — | — | V | I _c =50 μA |
| Collector-emitter breakdown voltage | BV _{CE0} | 50 | — | — | V | I _c =1mA |
| Emitter-base breakdown voltage | BV _{EB0} | 7 | — | — | V | I _E =50 μA |
| Collector cutoff current | I _{cB0} | — | — | 0.1 | μA | V _{CB} =60V |
| Emitter cutoff current | I _{EB0} | — | — | 0.1 | μA | V _{EB} =7V |
| Collector-emitter saturation voltage | V _{CE(sat)} | — | — | 0.4 | V | I _c /I _E =50mA/5mA |
| DC current transfer ratio | h _{FE} | 120 | — | 560 | — | V _{CE} =6V, I _c =1mA |
| Transition frequency | f _r | — | 180 | — | MHz | V _{CE} =12V, I _E =-2mA, f=100MHz * |
| Output capacitance | C _{ob} | — | 2 | 3.5 | pF | V _{CE} =12V, I _E =0mA, f=1kHz |

* Transition frequency of the device.

(96-427-C022)