

USA / European specification models types [Surface mounting type]

● UMT3 / NPN type

General purpose small signal amplifiers

UMT3 package

| Product name | BV _{CEO} | BV _{CEO} | BV _{CEO} | I _C | I _{CEO} | @V _{CE} | h _{FE} | | @I _C | @V _{CE} | V _{CE} (sat) | | V _{BE} (sat) | | C _{ob} | f _r | toff | MARKING | DIE NO. |
|--------------|-------------------|-------------------|-------------------|----------------|------------------|------------------|-----------------|------|-----------------|------------------|-----------------------|---|-----------------------|----------|-----------------|----------------|------|---------|---------|
| | Min. (V) | Min. (V) | Min. (V) | Max. (mA) | Max. (μV) | | Min. | Max. | | | Max. (V) | & | Max. (V) | Max. (V) | | | | | |
| BC848BW | 30 | 30 | 5 | 100 | 0.1 | 30 | 200 | 450 | 2 | 5 | 0.6 | — | 100 | 3 | 200 | — | — | G1K | C22 |

● UMT3 / PNP type

General purpose small signal amplifiers

UMT3 package

| Product name | BV _{CEO} | BV _{CEO} | BV _{CEO} | I _C | I _{CEO} | @V _{CE} | h _{FE} | | @I _C | @V _{CE} | V _{CE} (sat) | | V _{BE} (sat) | | C _{ob} | f _r | toff | MARKING | DIE NO. |
|--------------|-------------------|-------------------|-------------------|----------------|------------------|------------------|-----------------|------|-----------------|------------------|-----------------------|---|-----------------------|----------|-----------------|----------------|------|---------|---------|
| | Min. (V) | Min. (V) | Min. (V) | Max. (mA) | Max. (μV) | | Min. | Max. | | | Max. (V) | & | Max. (V) | Max. (V) | | | | | |
| BC858BW | 30 | 30 | 5 | 100 | 0.1 | 30 | 210 | 480 | 2 | 5 | 0.65 | — | 100 | 4.5 | 250 | — | — | G3K | A32 |

*The minus sign (—) on PNP values has been omitted.

General purpose amplification and switching

| Product name | BV _{CEO} | BV _{CEO} | BV _{CEO} | I _C | I _{CEO} | @V _{CE} | h _{FE} | | @I _C | @V _{CE} | V _{CE} (sat) | | V _{BE} (sat) | | C _{ob} | f _r | toff | MARKING | DIE NO. |
|--------------|-------------------|-------------------|-------------------|----------------|------------------|------------------|-----------------|------|-----------------|------------------|-----------------------|------|-----------------------|----------|-----------------|----------------|------|---------|---------|
| | Min. (V) | Min. (V) | Min. (V) | Max. (mA) | Max. (μV) | | Min. | Max. | | | Max. (V) | & | Max. (V) | Max. (V) | | | | | |
| UMT2907A | 60 | 60 | 5 | 600 | 100 | 50 | 75 | | 0.1 | 10 | 0.4 | 1.3 | 150 | 8 | 200 | 50 | 180 | R2F | A31 |
| | | | | | | | 100 | | 1 | 10 | | | | | | | | | |
| | | | | | | | 100 | | 10 | 10 | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | 10 | | | | | | | | | |
| | | | | | | | 50 | | 500 | 10 | | | | | | | | | |
| UMT3906 | 40 | 40 | 5 | 200 | 50 | 30 | 60 | | 0.1 | 1 | 0.25 | 0.85 | 10 | 4.5 | 250 | 10 | 300 | R2A | A38 |
| | | | | | | | 80 | | 1 | 1 | | | | | | | | | |
| | | | | | | | 100 | 300 | 10 | 1 | | | | | | | | | |
| | | | | | | | 60 | | 50 | 1 | | | | | | | | | |
| | | | | | | | 30 | | 100 | 1 | | | | | | | | | |
| UMT4403 | 40 | 40 | 5 | 600 | 100 | 35 | 30 | | 0.1 | 1 | 0.4 | 0.95 | 150 | 8.5 | 200 | 20 | 225 | R2T | A31 |
| | | | | | | | 60 | | 1 | 1 | | | | | | | | | |
| | | | | | | | 100 | | 10 | 1 | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | 2 | | | | | | | | | |
| | | | | | | | 20 | | 500 | 2 | | | | | | | | | |

*The minus sign (—) on PNP values has been omitted.

General purpose amplification and switching

| Product name | BV _{CEO} | BV _{CEO} | BV _{CEO} | I _C | I _{CEO} | @V _{CE} | h _{FE} | | @I _C | @V _{CE} | V _{CE} (sat) | | V _{BE} (sat) | | C _{ob} | f _r | toff | MARKING | DIE NO. |
|--------------|-------------------|-------------------|-------------------|----------------|------------------|------------------|-----------------|------|-----------------|------------------|-----------------------|------|-----------------------|----------|-----------------|----------------|------|---------|---------|
| | Min. (V) | Min. (V) | Min. (V) | Max. (mA) | Max. (μV) | | Min. | Max. | | | Max. (V) | & | Max. (V) | Max. (V) | | | | | |
| UMT2222A | 75 | 40 | 6 | 600 | 100 | 60 | 35 | | 0.1 | 10 | 0.3 | 1.2 | 150 | 8 | 250 | 20 | 285 | R1P | C31 |
| | | | | | | | 50 | | 1 | 10 | | | | | | | | | |
| | | | | | | | 75 | | 10 | 10 | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | 10 | | | | | | | | | |
| | | | | | | | 50 | | 150 | 1 | | | | | | | | | |
| UMT3904 | 60 | 40 | 6 | 200 | 50 | 30 | 40 | | 0.1 | 1 | 0.2 | 0.85 | 10 | 4 | 300 | 10 | 250 | R1A | C37 |
| | | | | | | | 70 | | 1 | 1 | | | | | | | | | |
| | | | | | | | 100 | 300 | 10 | 1 | | | | | | | | | |
| | | | | | | | 60 | | 50 | 1 | | | | | | | | | |
| | | | | | | | 30 | | 100 | 1 | | | | | | | | | |
| UMT4401 | 60 | 40 | 6 | 600 | 100 | 35 | 20 | | 0.1 | 1 | 0.4 | 0.95 | 150 | 6.5 | 250 | 20 | 225 | R2X | C31 |
| | | | | | | | 40 | | 1 | 1 | | | | | | | | | |
| | | | | | | | 80 | | 10 | 1 | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | 1 | | | | | | | | | |
| | | | | | | | 40 | | 500 | 2 | | | | | | | | | |

● SST3 - SMT3 / PNP type (cont.)



General purpose amplification and switching

SST3 package

SMT3 package

| Product name | | BV _{CB0} | BV _{CE0} | BV _{EB0} | I _{CB0} | @V _{CB} | h _{FE} | | V _{CE} (sat) | | | C _{ob} | f _r | f _{off} | | I _c | MARKING | DIE NO. | | | | | |
|--------------|-----------|-------------------|-------------------|-------------------|---------------------------|------------------|-----------------|------|-----------------------|------------------|-----------------|-----------------|----------------|------------------|-----------------|----------------|---------|---------|------|------|------|-----|---|
| Package | | Min. | Min. | Min. | Max. | | Min. | Max. | Max. | Max. | @I _c | | | Max. | Max. | | | | Max. | Max. | Max. | | |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | (V) | Min. | Max. | @I _c | @V _{CE} | (V) | (V) | (pF) | Min. | @I _c | (ns) | (mA) | | | | | | |
| SST2222A | MMST2222A | 75 | 40 | 6 | 100 | 60 | 35 | 10 | 0.1 | 10 | 0.3 | 1.2 | 150 | 8 | 250 | 20 | 285 | 600 | R1P | C31 | | | |
| | | | | | | | 50 | 1 | 10 | | | | | | | | | | | | | | |
| | | | | | | | 75 | 10 | 10 | | | | | | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | 10 | | | | | | | | | | | | | |
| | | | | | | | 50 | 150 | 1 | 30 | | | | | | | | | | | 500 | 10 | |
| SST3904 | MMST3904 | 60 | 40 | 6 | 50 (I _{CEx}) | 30 | 40 | 1 | 0.1 | 1 | 0.2 | 0.85 | 10 | 4 | 300 | 10 | 250 | 200 | R1A | C37 | | | |
| | | | | | | | 70 | 1 | 1 | | | | | | | | | | | | | | |
| | | | | | | | 100 | 300 | 10 | 1 | | | | | | | | | | | | | |
| | | | | | | | 60 | 50 | 1 | 30 | | | | | | | | | | | 100 | 1 | |
| | | | | | | | 30 | 100 | 1 | | | | | | | | | | | | | | |
| — | MMST4124 | 30 | 25 | 5 | 50 | 20 | 120 | 360 | 2.0 | 1 | 0.3 | 0.95 | 50 | 4 | 300 | 10 | — | 200 | RZC | C37 | | | |
| SST4401 | MMST4401 | 60 | 40 | 6 | 100 | 35 | 20 | 1 | 0.1 | 1 | 0.4 | 0.95 | 150 | 6.5 | 250 | 20 | 225 | 600 | R2X | C31 | | | |
| | | | | | | | 40 | 1 | 1 | | | | | | | | | | | | | | |
| | | | | | | | 80 | 10 | 1 | 100 | | | | | | | | | | | 300 | 150 | 1 |
| | | | | | | | 100 | 300 | 150 | 1 | | | | | | | | | | | 500 | 2 | |
| | | | | | | | 40 | 500 | 2 | | | | | | | | | | | | | | |

Medium power amplification

| Product name | | BV _{CB0} | BV _{CE0} | BV _{EB0} | I _{CB0} | @V _{CB} | h _{FE} | | V _{CE} (sat) | | | C _{ob} | f _r | f _{off} | | I _c | MARKING | DIE NO. | |
|--------------|---------|-------------------|-------------------|-------------------|------------------|------------------|-----------------|------|-----------------------|------------------|-----------------|-----------------|----------------|------------------|-----------------|----------------|---------|---------|------|
| Package | | Min. | Min. | Min. | Max. | | Min. | Max. | Max. | Max. | @I _c | | | Max. | Max. | | | | Max. |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | (V) | Min. | Max. | @I _c | @V _{CE} | (V) | (V) | (pF) | Min. | @I _c | (ns) | (mA) | | |
| SSTA05 | — | 60 | 60 | 4 | 100 | 60 | 100 | 100 | 10 | 1 | 0.25 | 1.2 | 100 | 100 | 10 | | 500 | R1H | D16 |
| SSTA06 | MMSTA06 | 80 | 80 | 4 | 100 | 80 | 100 | 100 | 10 | 1 | 0.25 | 1.2 | 100 | 100 | 10 | | 500 | R1G | D16 |

Darlington pair type

| Product name | | BV _{CB0} | BV _{CE0} | BV _{EB0} | I _{CB0} | @V _{CB} | h _{FE} | | V _{CE} (sat) | | | C _{ob} | f _r | NF | I _c | MARKING | DIE NO. |
|--------------|---------|---------------------------|-------------------|-------------------|------------------|------------------|-----------------|------|-----------------------|------------------|-----------------|-----------------|----------------|------|----------------|---------|---------|
| Package | | Min. | Min. | Min. | Max. | | Min. | Max. | Max. | Max. | @I _c | | | | | | |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | (V) | Min. | Max. | @I _c | @V _{CE} | (V) | (V) | (pF) | (dB) | (mA) | | |
| SST6427 | — | 40 | 40 | 12 | 50 | 30 | 10 | 100 | 10 | 5 | 1.2 | 50 | 7 | | 500 | R1J | D25 |
| SSTA13 | MMSTA13 | (V _{CEs}) 30 | | 10 | 100 | 30 | 5 | 10 | 5 | 1.5 | 100 | 10 | 125 | 10 | 500 | R1M | D25 |
| | | | | | | | 10 | 100 | 5 | | | | | | | | |
| SSTA14 | MMSTA14 | (V _{CEs}) 30 | | 10 | 100 | 30 | 10 | 10 | 5 | 1.5 | 100 | 10 | 125 | 10 | 500 | R1N | D25 |
| | | | | | | | 20 | 100 | 5 | | | | | | | | |
| SSTA28 | MMSTA28 | (V _{CEs}) 80 | | 12 | 100 | 60 | 10 | 10 | 5 | 1.5 | 100 | 8 | 125 | 10 | 500 | RAT | D69 |
| | | | | | | | 10 | 100 | 5 | | | | | | | | |

High frequency applications

| Product name | | BV _{CB0} | BV _{CE0} | BV _{EB0} | I _{CB0} | @V _{CB} | h _{FE} | | V _{CE} (sat) | | | C _{ob} | f _r | NF | I _c | MARKING | DIE NO. | | | |
|--------------|---------|-------------------|-------------------|-------------------|----------------------------|------------------|-----------------|------|-----------------------|------------------|-----------------|-----------------|----------------|-------|-----------------|---------|---------|------|------|------|
| Package | | Min. | Min. | Min. | Max. | | Min. | Max. | Max. | Max. | @I _c | | | | | | | Max. | Max. | Max. |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | (V) | Min. | Max. | @I _c | @V _{CE} | (V) | (V) | (pF) | (MHz) | @I _c | (dB) | (mA) | | | |
| SST8245 | — | 30 | 20 | 3 | 100 (I _{CES}) | 18 | 60 | 150 | 2.5 | 4 | 0.4 | 1 | 10 | 1.2 | 600 | 2.5 | 50 | R3B | C33 | |
| — | MMST918 | 30 | 15 | 3 | 100 | 15 | 20 | | 3 | 1 | 0.4 | 1 | 10 | 1.7 | 600 | 4 | 6 | 50 | RVX | C33 |

● SST3 - SMT3 / PNP type



General purpose amplification and switching (cont.)

SST3 package

SMT3 package

| Product name | | BV _{CEO} | BV _{CEO} | BV _{EB0} | I _{CEO} | h _{FE} | | V _{CE} (sat) | | V _{BE} (sat) | Cob | f _r | t _{off} | I _C | MARKING | DIE NO. | | | | |
|--------------|----------|-------------------|-------------------|-------------------|---------------------------|------------------|-----------------|-----------------------|------|-----------------------|------|----------------|------------------|----------------|---------|---------|-----|-----|-----|---|
| Package | | Min. | Min. | Min. | Max. | Min. | Max. | Max. | Max. | Max. | Max. | Min. | Max. | Max. | | | | | | |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | @V _{CB} | @I _C | @V _{CE} | (V) | (V) | (pF) | (MHz) | (ns) | (mA) | | | | | | |
| SST3906 | MMST3906 | 40 | 40 | 5 | 50 (I _{CE5}) | 30 | 60 | 0.1 | 1 | 0.25 | 0.85 | 10 | 4.5 | 250 | 10 | 300 | 200 | R2A | A38 | |
| | | | | | | | 80 | 1 | 1 | | | | | | | | | | | |
| | | | | | | | 100 | 10 | 1 | | | | | | | | | | | |
| | | | | | | | 60 | 50 | 1 | | | | | | | | | | | |
| | | | | | | | 30 | 100 | 1 | | | | | | | | | | | |
| - | MMST4126 | 25 | 25 | 4 | 50 | 20 | 120 | 360 | 2 | 1 | 0.4 | 0.95 | 50 | 4.5 | 250 | 10 | 200 | RVZ | A38 | |
| | | | | | | | 60 | 50 | 1 | | | | | | | | | | | |
| SST4403 | MMST4403 | 40 | 40 | 5 | 100 | 35 | 30 | 0.1 | 1 | 0.4 | 0.95 | 150 | 8.5 | 200 | 20 | 255 | 600 | R2T | A31 | |
| | | | | | | | 60 | 1 | 1 | | | | | | | | | | | |
| | | | | | | | 100 | 10 | 1 | | | | | | | | | | | |
| | | | | | | | 100 | 300 | 150 | | | | | | | | | | | 2 |
| | | | | | | | 20 | 500 | 2 | | | | | | | | | | | |

*The minus sign (-) on PNP values has been omitted.

Medium power amplification

| Product name | | BV _{CEO} | BV _{CEO} | BV _{EB0} | I _{CEO} | h _{FE} | | V _{CE} (sat) | | V _{BE} (sat) | Cob | f _r | t _{off} | I _C | MARKING | DIE NO. | | | |
|--------------|---------|-------------------|-------------------|-------------------|------------------|------------------|-----------------|-----------------------|------|-----------------------|------|----------------|------------------|----------------|---------|---------|-----|-----|-----|
| Package | | Min. | Min. | Min. | Max. | Min. | Max. | Max. | Max. | Max. | Max. | Min. | Max. | Max. | | | | | |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | @V _{CB} | @I _C | @V _{CE} | (V) | (V) | (pF) | (MHz) | (ns) | (mA) | | | | | |
| SSTA56 | MMSTA56 | 80 | 80 | 4 | 100 | 80 | 100 | 10 | 1 | 0.25 | 1.2 | 100 | | 50 | 100 | | 500 | R2G | B93 |

*The minus sign (-) on PNP values has been omitted.

Darlington pair type

| Product name | | BV _{CEO} | BV _{CEO} | BV _{EB0} | I _{CEO} | h _{FE} | | V _{CE} (sat) | | V _{BE} (sat) | Cob | f _r | NF | I _C | MARKING | DIE NO. | | | |
|--------------|---------|-------------------|---------------------------|-------------------|------------------|------------------|-----------------|-----------------------|------|-----------------------|------|----------------|------|----------------|---------|---------|-----|-----|-----|
| Package | | Min. | Min. | Min. | Max. | Min. | Max. | Max. | Max. | Max. | Max. | Min. | Max. | Max. | | | | | |
| SST3 | SMT3 | (V) | (V) | (V) | (nA) | @V _{CB} | @I _C | @V _{CE} | (V) | (V) | (pF) | (MHz) | (dB) | (mA) | | | | | |
| - | MMSTA64 | 30 | 30 (V _{CE5}) | 10 | 100 | 30 | 10k | 10 | 5 | 1.5 | | 100 | 7 | 125 | 10 | 3 | 300 | R2V | B25 |

*The minus sign (-) on PNP values has been omitted.



● MPT3 / NPN type

MPT3 package

| Application | Product name | V _{CEO} | I _C | P _C | f _r | Cob | h _{FE} | MARKING | DIE NO. |
|-------------|--------------|------------------|----------------|----------------|----------------|------|-----------------|---------|---------|
| | | (V) | (A) | (W)★ | (MHz) | (pF) | | | |
| Driver | BCX56 | 80 | 1 | 1 | 100 | 20 | 40~250 | DF | D54 |

★ On 14×18×0.7mm ceramic board.



● MPT3 / PNP type

MPT3 package

| Application | Product name | V _{CEO} | I _C | P _C | f _r | Cob | h _{FE} | MARKING | DIE NO. |
|-------------|--------------|------------------|----------------|----------------|----------------|------|-----------------|---------|---------|
| | | (V) | (A) | (W)★ | (MHz) | (pF) | | | |
| Driver | BCX53 | 80 | 1 | 1 | 100 | 20 | 40~250 | BE | B54 |

*The minus sign (-) on PNP values has been omitted.

★ On 14×18×0.7mm ceramic board.