# Low frequency transistor, complex (2-elements) Bipolar Transistor

## EMX28

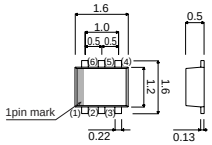
### ●Structure
NPN Silicon Epitaxial Planar Transistor

### ●Features
1) Two 2SD2696 dies are incorpolated in the EMT6 package.
2) Collector saturation voltage is low.
   $V_{CE\,(sat)}$ : max. 300mA at $I_C$ = 100mA / $I_B$ = 2mA

### ●Applications
General purpose small signal amplifier

### ●External dimensions (Unit : mm)

**EMT6**



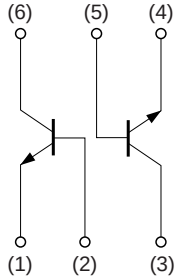

Each lead has same dimensions

Abbreviated symbol : X28

### ●Packaging specifications

| | | |
|---|---|---|
| Type | Package | Taping |
| | Code | T2R |
| | Basic ordering unit (pieces) | 8000 |
| EMX28 | | ○ |

### ●Inner circuit




### ●Absolute maximum ratings (Ta=25°C)
<Tr1, Tr2>

| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | 30 | V |
| Collector-emitter voltage | $V_{CEO}$ | 30 | V |
| Emitter-base voltage | $V_{EBO}$ | 6 | V |
| Collector current | $I_C$ | 400 | mA |
| | $I_{CP}$ *1 | 800 | mA |
| Power dissipation | $P_D$ *2 | 150 | mW / TOTAL |
| | | 120 | mW / ELEMENT |
| Junction temperature | Tj | 150 | °C |
| Range of storage temperature | Tstg | −55 to +150 | °C |

*1 Pw=10ms, Single pulse
*2 Each terminal mounted on a recommended land.

### ●Electrical characteristics (Ta=25°C)
<Tr1, Tr2>

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|---|---|---|---|---|---|
| Collector-emitter breakdown voltage | $BV_{CEO}$ | 30 | – | – | V | $I_C$=1mA |
| Collector-base breakdown voltage | $BV_{CBO}$ | 30 | – | – | V | $I_C$=10μA |
| Emitter-base breakdown voltage | $BV_{EBO}$ | 6 | – | – | V | $I_E$=10μA |
| Collector cut-off current | $I_{CBO}$ | – | – | 100 | nA | $V_{CB}$= 30V |
| Emitter cut-off current | $I_{EBO}$ | – | – | 100 | nA | $V_{EB}$= 6V |
| Collector-emitter saturation voltage | $V_{CE\,(sat)}$ | – | 120 | 300 | mV | $I_C$=100mA, $I_B$= 2mA |
| DC current gain | $h_{FE}$ | 270 | – | 680 | – | $V_{CE}$=2V, $I_C$=100mA |
| Transition frequency | $f_T$ | – | 400 | – | MHz | $V_{CE}$=2V, $I_E$= −100mA, f=100MHz |
| Output capacitance | $C_{ob}$ | – | 3.0 | – | pF | $V_{CB}$=10V, $I_E$= 0A, f=1MHz |

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