

Transistors

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

## EMX28

●Structure

NPN Silicon Epitaxial Planar Transistor

●Features

- 1) Two 2SD2696 dies are incorporated in the EMT6 package.
- 2) Collector saturation voltage is low.

$$V_{CE(sat)} : \text{max. } 300\text{mA} \quad \text{at } I_C = 100\text{mA} / I_B = 2\text{mA}$$

●Applications

General purpose small signal amplifier

●Packaging specifications

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

●Absolute maximum ratings (Ta=25°C)

<Tr1, Tr2>

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	30	V
Collector-emitter voltage	$V_{CE0}$	30	V
Emitter-base voltage	$V_{EB0}$	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	$T_j$	150	°C
Range of storage temperature	$T_{stg}$	-55 to +150	°C

\*1  $P_w=10\text{ms}$ , Single pulse

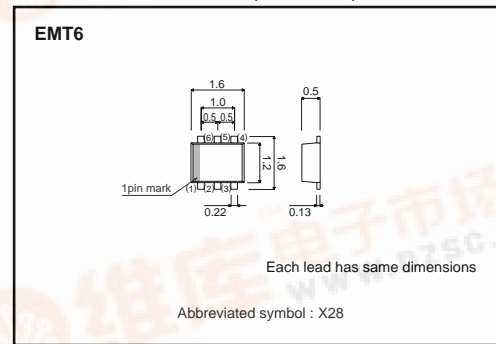
\*2 Each terminal mounted on a recommended land.

●Electrical characteristics (Ta=25°C)

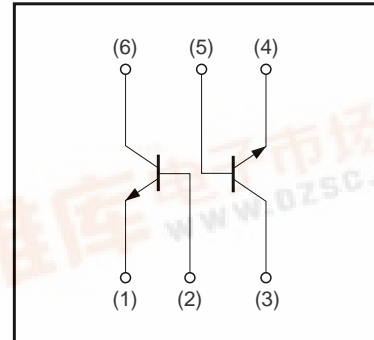
<Tr1, Tr2>

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

●External dimensions (Unit : mm)



●Inner circuit



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