

EMW2 / EMX2 / EMX3 / UMW2N / UMX2N /  
UMX3N / FMW2 / IMX2 / IMX3

Transistors

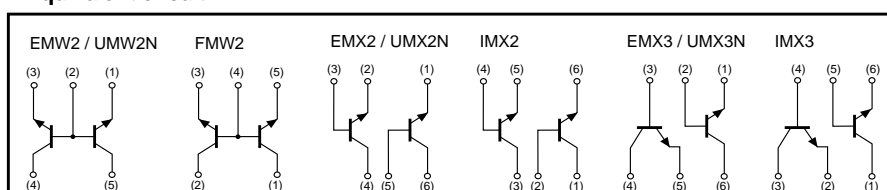
# General purpose (dual transistors)

## EMW2 / EMX2 / EMX3 / UMW2N / UMX2N / UMX3N / FMW2 / IMX2 / IMX3

### ●Features

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

### ●Equivalent circuit



### ●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V <sub>CB0</sub>	60	V
Collector-emitter voltage		V <sub>CE0</sub>	50	V
Emitter-base voltage		V <sub>EB0</sub>	7	V
Collector current		I <sub>c</sub>	150	mA
Collector power dissipation	EMW2 / EMX2 / EMX3 / UMW2N / UMX2N / UMX3N	P <sub>c</sub>	150(TOTAL)	mW *1
	FMW2 / IMX2 / IMX3		300(TOTAL)	mW *2
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature		T <sub>stg</sub>	-55~+150	°C

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

### ●Electrical characteristics (Ta = 25°C)

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

\*Transition frequency of the device.

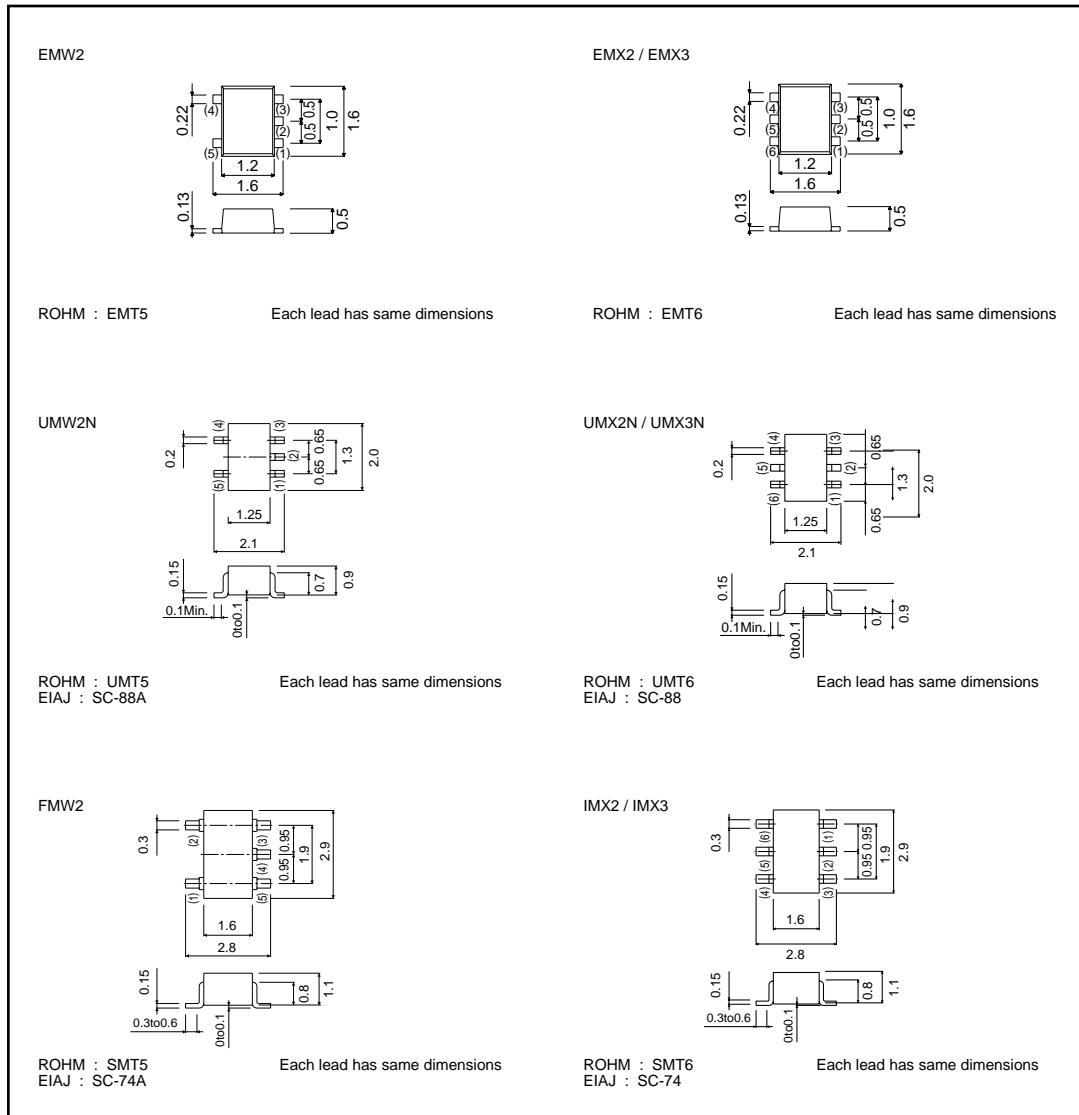
### ●Package, marking, and packaging specifications

Type	EMW2	EMX2	EMX3	UMW2N	UMX2N	UMX3N	FMW2	IMX2	IMX3
Package	EMT5	EMT6	EMT6	UMT5	UMT6	UMT6	SMT5	SMT6	SMT6
Marking	W2	X2	X3	W2	X2	X3	W2	X2	X3
Code	T2R	T2R	T2R	TR	TR	TR	T148	T108	T108
Basic ordering unit (pieces)	8000	8000	8000	3000	3000	3000	3000	3000	3000

# EMW2 / EMX2 / EMX3 / UMW2N / UMX2N / UMX3N / FMW2 / IMX2 / IMX3

## Transistors

● External dimensions (Units : mm)



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