

Transistors

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

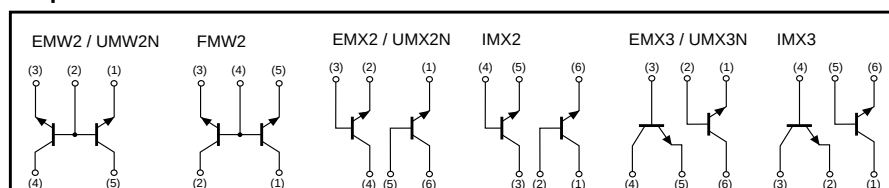
General purpose (dual transistors)

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_{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	EMW2 / EMX2 / EMX3 / UMW2N / UMX2N / UMX3N	P_C	150(TOTAL)	*1
	FMW2 / IMX2 / IMX3		300(TOTAL)	*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.

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	60	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CE0}	50	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EB0}	7	—	—	V	$I_E=50\mu A$
Collector cutoff current	I_{CBO}	—	—	0.1	μA	$V_{CB}=60V$
Emitter cutoff current	I_{EBO}	—	—	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_T	—	180	—	MHz	$V_{CE}=12V, I_E=-2mA, f=100MHz$ *
Output capacitance	C_{ob}	—	2	3.5	pF	$V_{CB}=12V, I_E=0mA, f=1kHz$

*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

Transistors

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External dimensions (Units : mm)

EMW2		EMX2 / EMX3	
ROHM : EMT5	Each lead has same dimensions	ROHM : EMT6	Each lead has same dimensions
UMW2N		UMX2N / UMX3N	
ROHM : UMT5 EIAJ : SC-88A	Each lead has same dimensions	ROHM : UMT6 EIAJ : SC-88	Each lead has same dimensions
FMW2		IMX2 / IMX3	
ROHM : SMT5 EIAJ : SC-74A	Each lead has same dimensions	ROHM : SMT6 EIAJ : SC-74	Each lead has same dimensions

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