

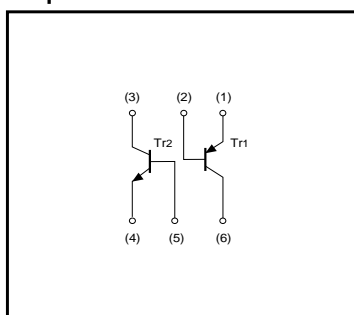
Power management (dual transistors)

EMZ8 / UMZ8N

●Feature

- 1) Both a 2SA2018 chip and 2SC2412K chip in a EMT or UMT package.

●Equivalent circuits



●Absolute maximum ratings (Ta = 25°C)

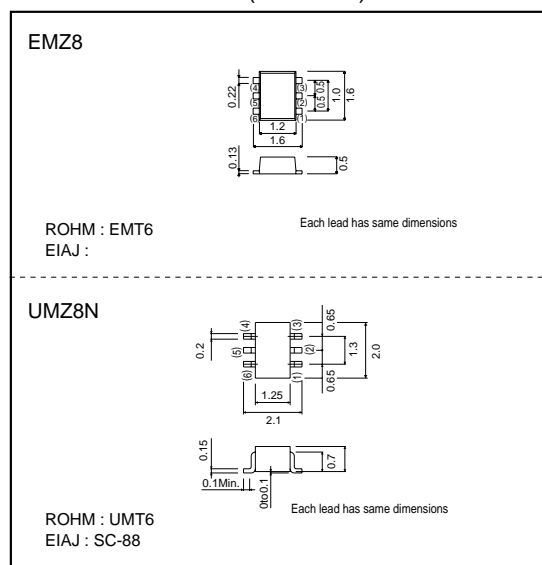
Parameter	Symbol	Limits		Unit
		Tr1	Tr2	
Collector-base voltage	V _{CB0}	-15	60	V
Collector-emitter voltage	V _{CE0}	-12	50	V
Emitter-base voltage	V _{EB0}	-6	7	V
Collector current	I _c	-150	150	mA
Collector power dissipation	P _c	150 (TOTAL)		mW *
Junction temperature	T _j	150		°C
Storage temperature	T _{stg}	-55~+150		°C

* 120mW per element must not be exceeded.

●Package, marking, and packaging specifications

Part No.	EMZ8	UMZ8N
Package	EMT6	UMT6
Marking	Z2	Z2
Code	T2R	TR
Basic ordering unit (pieces)	8000	3000

●External dimensions (Units : mm)



Transistors

●Electrical characteristics (Ta=25°C)

Tr1

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-15	—	—	V	I _C = -10μA
Collector-emitter breakdown voltage	BV _{CE0}	-12	—	—	V	I _C = -1mA
Emitter-base breakdown voltage	BV _{EB0}	-6	—	—	V	I _E = -10μA
Collector cutoff current	I _{CB0}	—	—	-0.1	μA	V _{CB} = -15V
Emitter cutoff current	I _{EB0}	—	—	-0.1	μA	V _{EB} = -6V
Collector-emitter saturation voltage	V _{CE(sat)}	—	-0.1	-0.25	V	I _C /I _B = -200mA/-10mA
DC current transfer ratio	h _{FE}	270	—	680	—	V _{CE} = -2V, I _C = -10mA
Transition frequency	f _T	—	260	—	MHz	V _{CE} = -2V, I _E = 10mA, f = 100MHz
Output capacitance	C _{ob}	—	6.5	—	pF	V _{CB} = -10V, I _E = 0A, f = 1MHz

Tr2

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	60	—	—	V	I _C = 50μA
Collector-emitter breakdown voltage	BV _{CE0}	50	—	—	V	I _C = 1mA
Emitter-base breakdown voltage	BV _{EB0}	7	—	—	V	I _E = 50μA
Collector cutoff current	I _{CB0}	—	—	0.1	μA	V _{CB} = 60V
Emitter cutoff current	I _{EB0}	—	—	0.1	μA	V _{EB} = 7V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.4	V	I _C /I _B = 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 = 0A, f = 1MHz