

Power management (dual transistors)

VT6T12

●Structure

PNP silicon epitaxial planar transistor

●Features

- 1) Very small package with two transistors.
- 2) Suitable for current mirror circuits.

●Applications

Current mirror circuits

●Packaging specifications

Type	Package	Taping
	Code	T2R
	Basic ordering unit (pieces)	8000
VT6T12		○

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	V _{CB0}	-50	V	
Collector-emitter voltage	V _{CEO}	-50	V	
Emitter-base voltage	V _{EBO}	-5	V	
Collector current	I _c	-100	mA	
	I _{CP} *1	-200	mA	
Power dissipation	Total	P _D *2	150	mW
	Element		120	mW
Junction temperature	T _j	150	°C	
Range of storage temperature	T _{stg}	-55 to +150	°C	

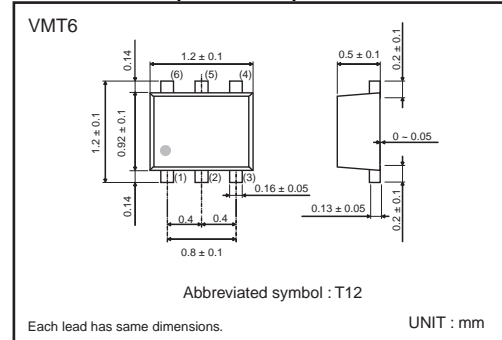
*1 P_w=1mS Single pulse

*2 Each terminal mounted on a recommended land

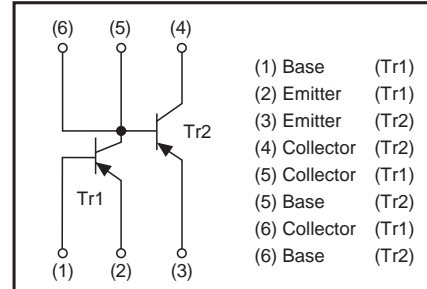
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV _{CEO}	-50	-	-	V	I _c =-1mA
Collector-base breakdown voltage	BV _{CB0}	-50	-	-	V	I _c =-50μA
Emitter-base breakdown voltage	BV _{EBO}	-5	-	-	V	I _E =-50μA
Collector cut-off current	I _{CB0}	-	-	-0.1	μA	V _{CB} =-50V
Emitter cut-off current	I _{EBO}	-	-	-0.1	μA	V _{EB} =-5V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-0.15	-0.40	V	I _c =-50mA, I _B =-5mA
DC current gain	h _{FE}	120	-	560	-	V _{CE} =-6V, I _c =-1mA
DC current gain ratio	h _{FE (Tr1) / h_{FE (Tr2)}}	0.9	-	1.1	-	V _{CE} =-6V, I _c =-1mA
Transition frequency	f _r	-	300	-	MHz	V _{CE} =-10V, I _E =10mA, f=100MHz
Output capacitance	C _{ob}	-	2	-	pF	V _{CB} =-10V, I _E =0A, f=1MHz

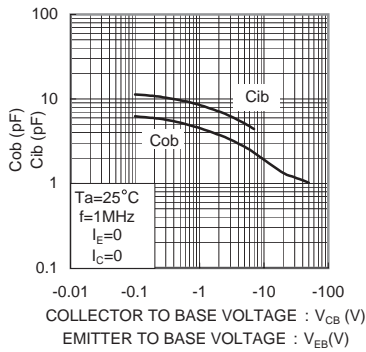
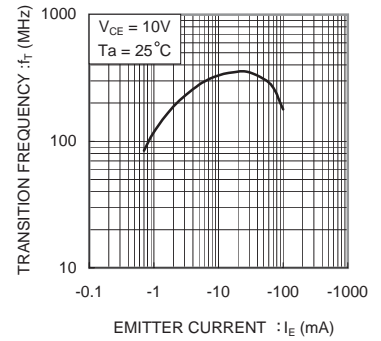
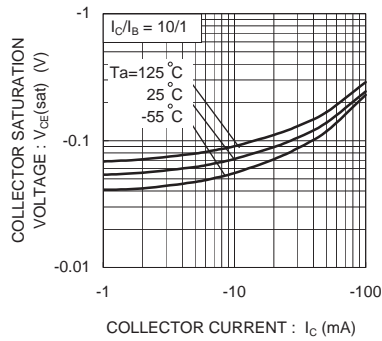
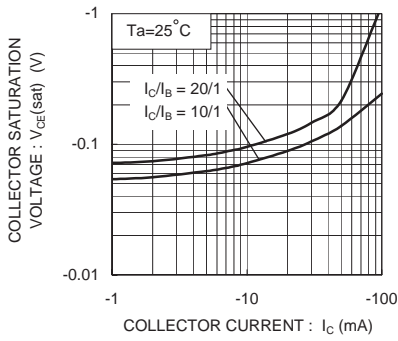
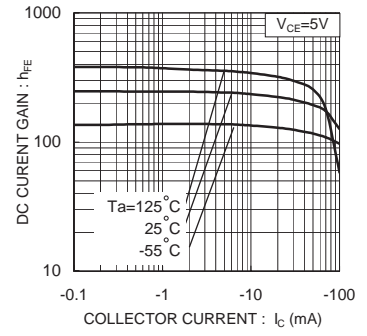
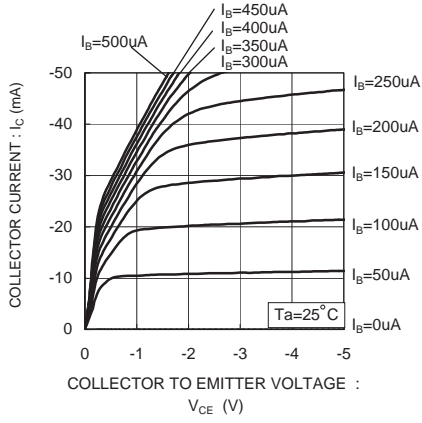
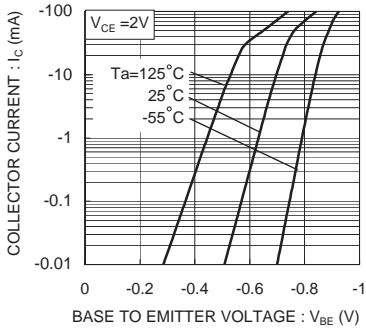
●Dimensions (Unit : mm)



●inner circuit



●Electrical characteristics curves



Notes

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