

Power management (dual transistors)

VT6X12

●Structure

NPN 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
VT6X12		○

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	V _{CB0}	50	V	
Collector-emitter voltage	V _{CE0}	50	V	
Emitter-base voltage	V _{EB0}	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	

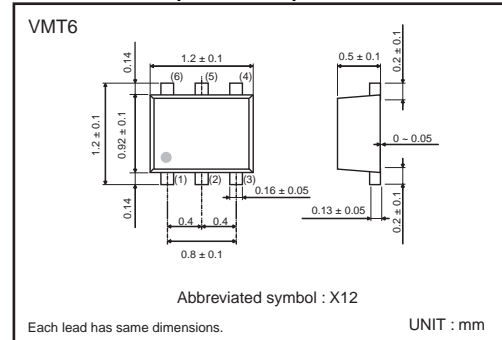
*1 Pw=1mS Single pulse

*2 Each terminal mounted on a recommended land

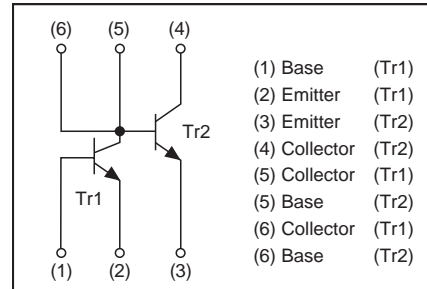
●Electrical characteristics (Ta=25°C)

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 _{EB0}	5	–	–	V	I _E =50μA
Collector cut-off current	I _{CB0}	–	–	0.1	μA	V _{CB} =50V
Emitter cut-off current	I _{EB0}	–	–	0.1	μA	V _{EB} =5V
Collector-emitter saturation voltage	V _{CE(sat)}	–	0.10	0.30	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	–	350	–	MHz	V _{CE} =10V, I _E =-10mA, f=100MHz
Output capacitance	C _{ob}	–	1.6	–	pF	V _{CB} =10V, I _E =0A, f=1MHz

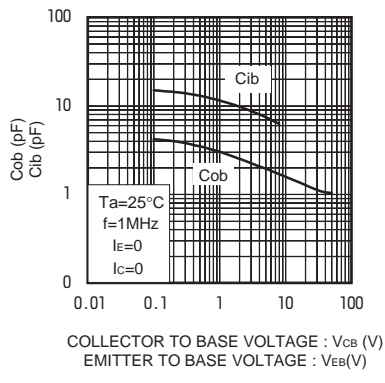
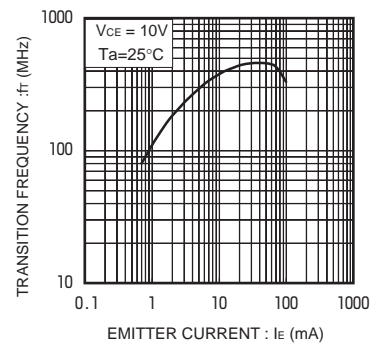
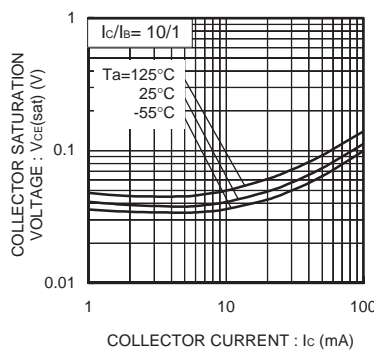
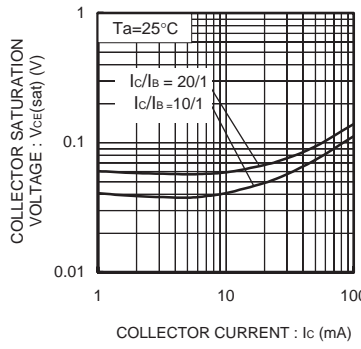
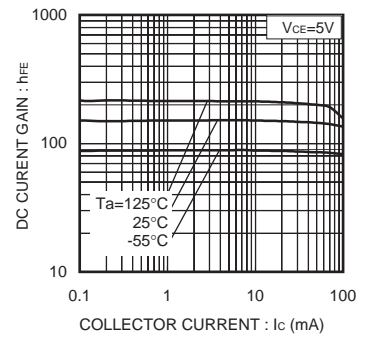
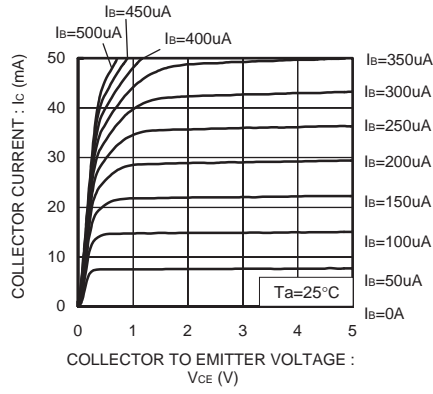
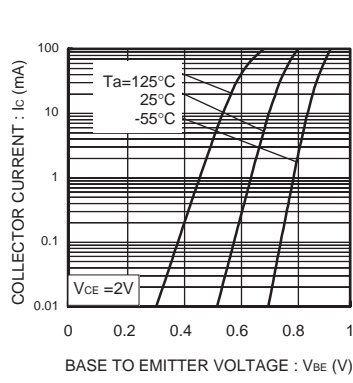
●Dimensions (Unit : mm)



●Inner circuit



●Electrical characteristics curves



Notes

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