Power management (dual transistors)

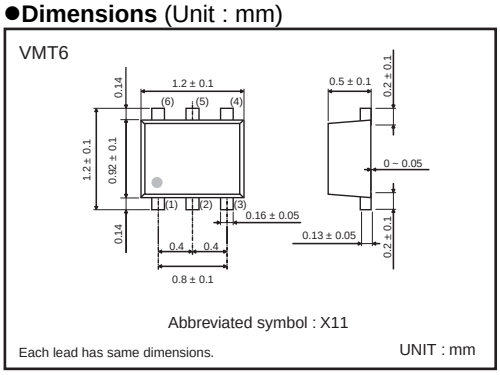
VT6X11

●Structure
NPN silicon epitaxial planar transistor

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

●Applications
Current mirror circuits

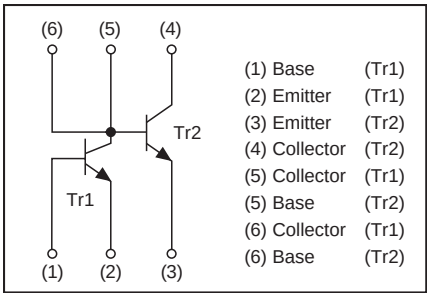
●Dimensions (Unit : mm)



●Packaging specifications

Type	Package	Taping
	Code	T2R
	Basic ordering unit (pieces)	8000
VT6X11		○

●Inner circuit



● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	20	V
Collector-emitter voltage		V_{CEO}	20	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	200	mA
		I_{CP} *1	400	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}	20	–	–	V	I_C=1mA
Collector-base breakdown voltage	BV_{CBO}	20	–	–	V	I_C=50μA
Emitter-base breakdown voltage	BV_{EBO}	5	–	–	V	I_E=50μA
Collector cut-off current	I_{CBO}	–	–	0.1	μA	V_{CB}=20V
Emitter cut-off current	I_{EBO}	–	–	0.1	μA	V_{EB}=5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	0.12	0.30	V	I_C=100mA, I_B=10mA
DC current gain	h_{FE}	120	–	560	–	V_{CE}=2V, I_C=1mA
DC current gain ratio	$h_{FE\ (Tr1)}$ / $h_{FE\ (Tr2)}$	0.9	–	1.1	–	V_{CE}=2V, I_C=1mA
Transition frequency	f_T	–	400	–	MHz	V_{CE}=10V, I_E=−10mA, f=100MHz
Output capacitance	Cob	–	2	–	pF	V_{CB}=10V, I_E=0A, f=1MHz

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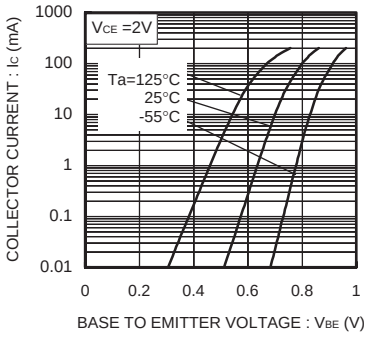
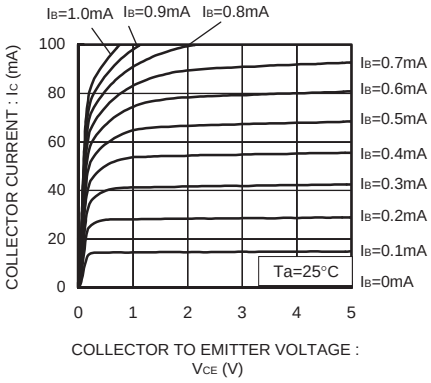
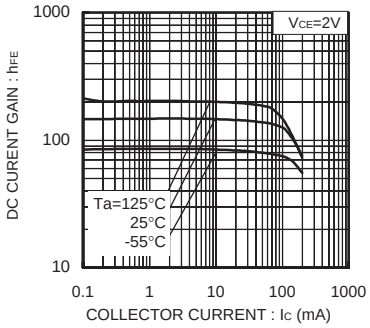
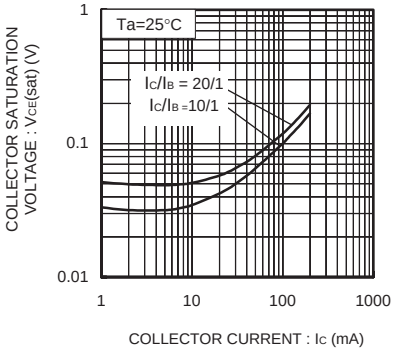
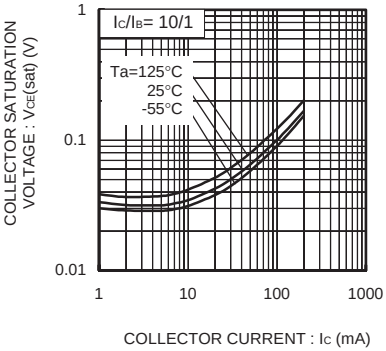
●Electrical characteristics curves

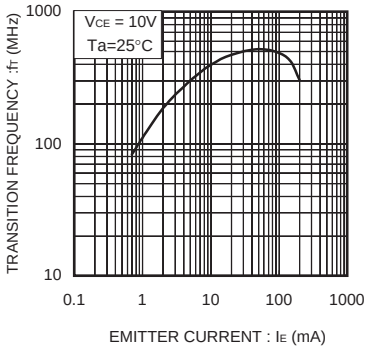


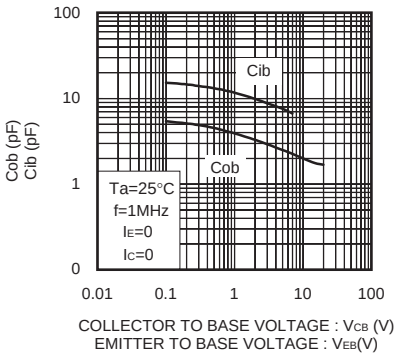












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