

Transistors

General purpose (dual transistors)

IMX8

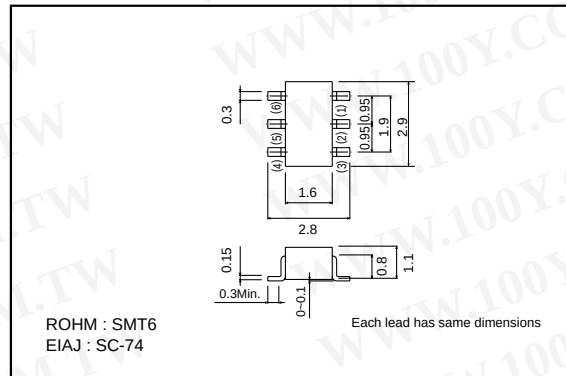
●Features

- 1) Two 2SC3906K chips in an SMT package.
- 2) High breakdown voltage.

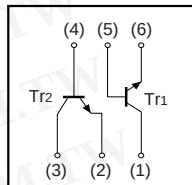
●Package, marking, and packaging specifications

Part No.	IMX8
Package	SMT6
Marking	X8
Code	T108
Basic ordering unit (pieces)	3000

●External dimensions (Unit : mm)



●Equivalent circuit



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	50	mA
Power dissipation	P_C	300(TOTAL)	mW *
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

* 200mW per element must not be exceeded.

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	120	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	120	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	$I_E=50\mu A$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB}=100V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB}=4V$
DC current transfer ratio	h_{FE}	180	—	820	—	$V_{CE}=6V, I_C=2mA$
Transition frequency	f_T	—	140	—	MHz	$V_{CE}=12V, I_E=-2mA, f=100MHz$ *
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	$I_C/I_B=10mA/1mA$

*Transition frequency of the device

Transistors

●Electrical characteristics

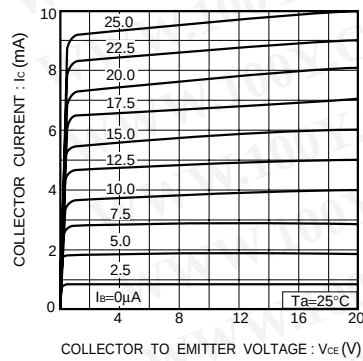


Fig.1 Ground emitter output characteristics

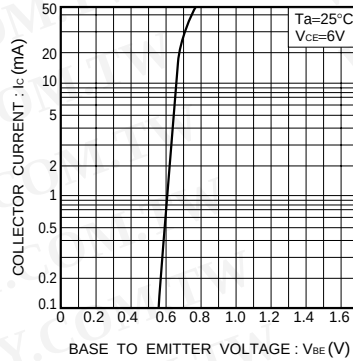


Fig.2 Ground emitter propagation characteristics

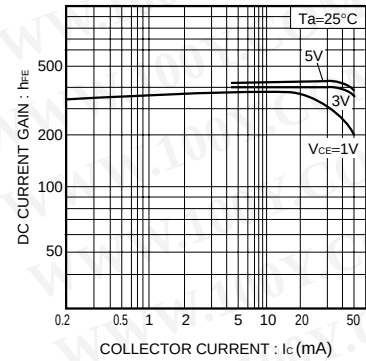


Fig.3 DC current gain vs. collector current

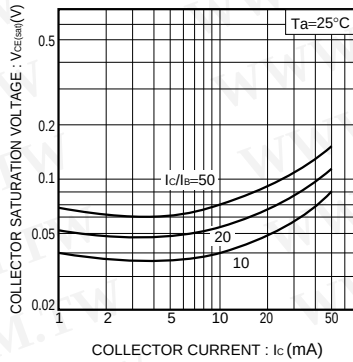


Fig.4 Collector-emitter saturation voltage vs. collector current (I)

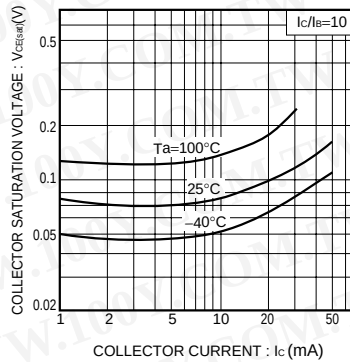


Fig.5 Collector-emitter saturation voltage vs. collector current (II)

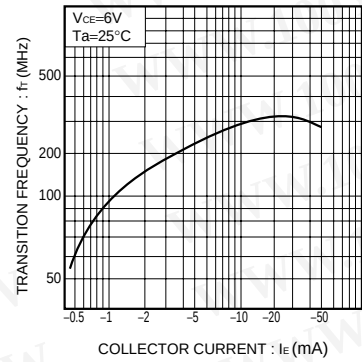


Fig.6 Gain bandwidth product vs. emitter current

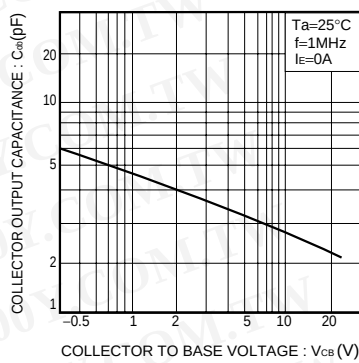


Fig.7 Collector output capacitance vs. collector-base voltage

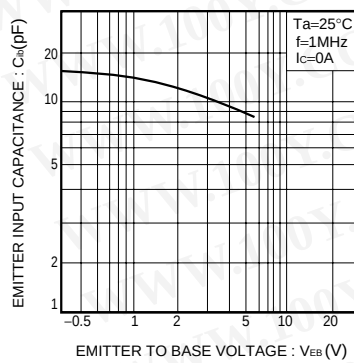


Fig.8 Emitter input capacitance vs. emitter-base voltage

Appendix

Notes

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