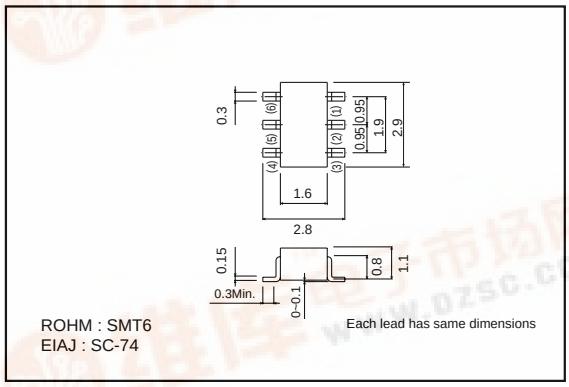
General purpose (dual transistors)

IMX8

●Features

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

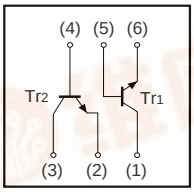
●External dimensions (Unit : mm)



●Package, marking, and packaging specifications

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

●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	Pc	300(TOTAL)	mW	*
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	−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=50μA	
Collector-emitter breakdown voltage	BV_{CEO}	120	–	–	V	I_C=1mA	
Emitter-base breakdown voltage	BV_{EBO}	5	–	–	V	I_E=50μA	
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

●Electrical characteristics

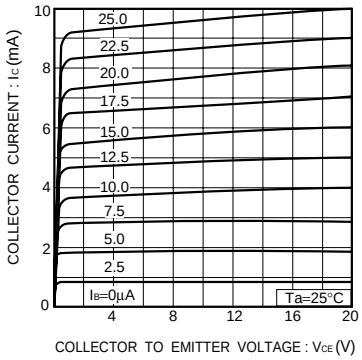


Fig.1 Ground emitter output characteristics

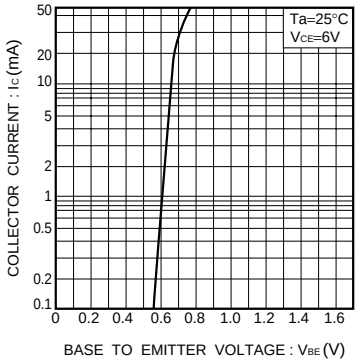


Fig.2 Ground emitter propagation characteristics

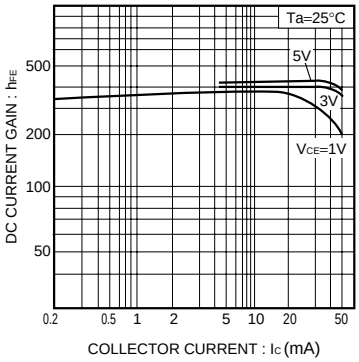


Fig.3 DC current gain vs. collector current

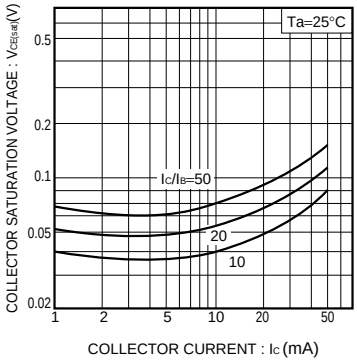


Fig.4 Collector-emitter saturation voltage vs. collector current (I)

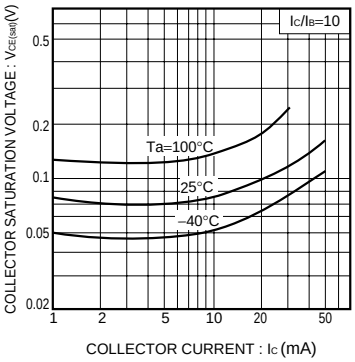


Fig.5 Collector-emitter saturation voltage vs. collector current (II)

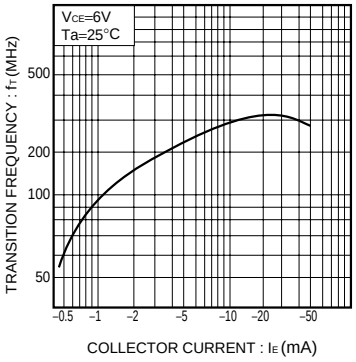


Fig.6 Gain bandwidth product vs. emitter current

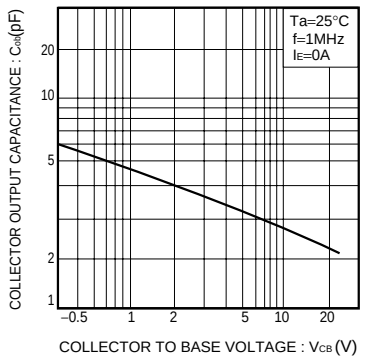


Fig.7 Collector output capacitance vs. collector-base voltage

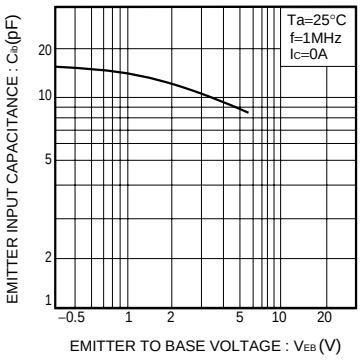


Fig.8 Emitter input capacitance vs. emitter-base voltage

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