

# General purpose (dual transistors)

## IMX8FRA

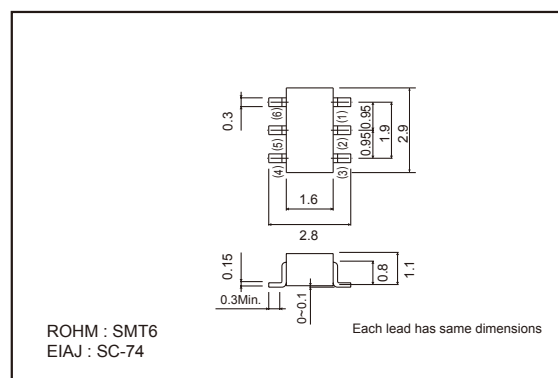
### ●Features

- 1) Two 2SC3906KFRA chips in an SMT package.
- 2) High breakdown voltage.

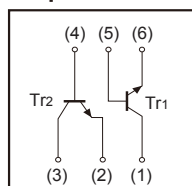
### ●Package, marking, and packaging specifications

Part No.	IMX8FRA
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	$\mu A$	$V_{CB}=100V$
Emitter cutoff current	$I_{EBO}$	-	-	0.5	$\mu A$	$V_{EB}=4V$
DC current transfer ratio	$h_{FE}$	180	-	820	-	$V_{CE}=6V, I_C=2mA$
Transition frequency	$f_r$	-	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

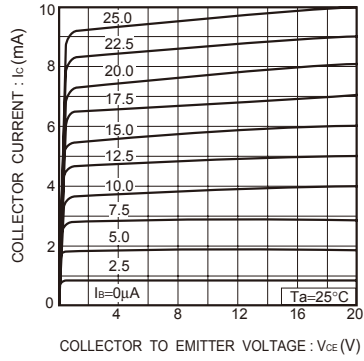


Fig.1 Ground emitter output characteristics

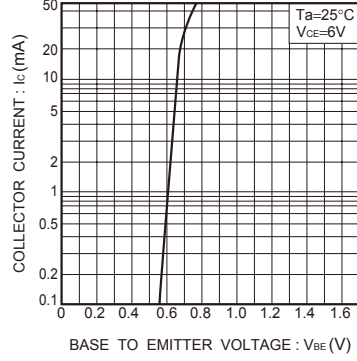


Fig.2 Ground emitter propagation characteristics

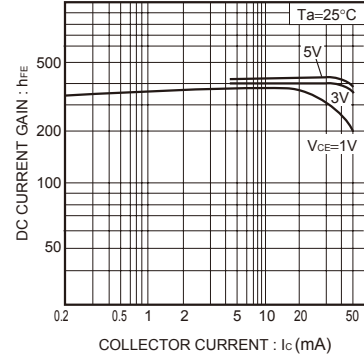


Fig.3 DC current gain vs. collector current

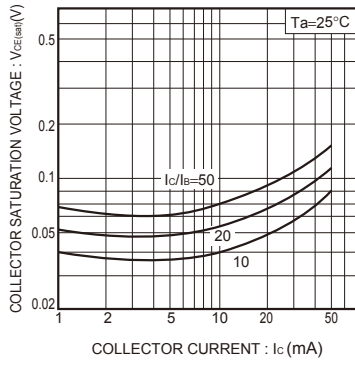


Fig.4 Collector-emitter saturation voltage vs. collector current ( I )

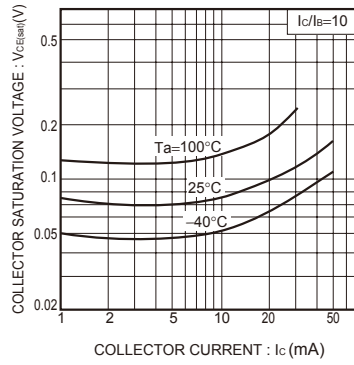


Fig.5 Collector-emitter saturation voltage vs. collector current ( II )

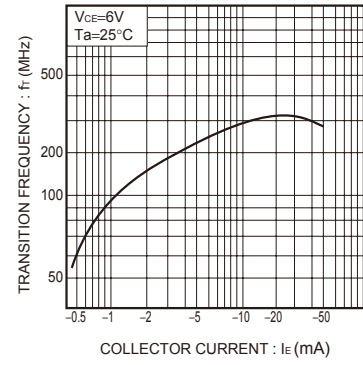


Fig.6 Gain bandwidth product vs. emitter current

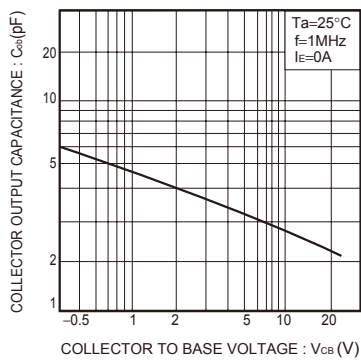


Fig.7 Collector output capacitance vs. collector-base voltage

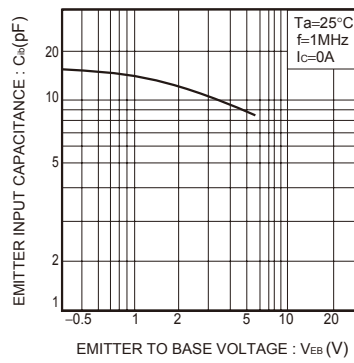


Fig.8 Emitter input capacitance vs. emitter-base voltage

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