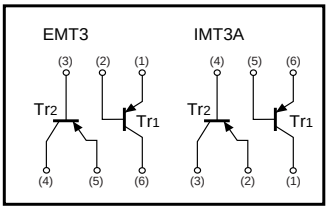
General purpose (dual transistors)

EMT3 / IMT3A

●Features

1) Two 2SA1037AK chips in a EMT or SMT package.

●Equivalent circuits



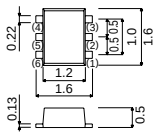
●Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	−60	V
Collector-emitter voltage		V_{CEO}	−50	V
Emitter-base voltage		V_{EBO}	−6	V
Collector current		I_C	−150	mA
Collector power dissipation	EMT3	P_C	150(TOTAL)	mW ∗1
	IMT3A		300(TOTAL)	∗2
Junction temperature		Tj	150	°C
Storage temperature		Tstg	−55 to +150	°C

∗1 120mW per element must not be exceeded.
∗2 200mW per element must not be exceeded.

●External dimensions (Unit : mm)

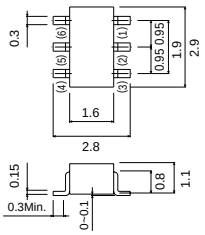
EMT3



Each lead has same dimensions

ROHM : EMT6

IMT3A



Each lead has same dimensions

ROHM : SMT6
EIAJ : SC-74

●Package, marking, and packaging specifications

Type	EMT3	IMT3A
Package	EMT6	SMT6
Marking	T3	T3
Code	T2R	T108
Basic ordering unit (pieces)	8000	3000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−60	−	−	V	I_C=−50μA
Collector-emitter breakdown voltage	BV_{CEO}	−50	−	−	V	I_C=−1mA
Emitter-base breakdown voltage	BV_{EBO}	−6	−	−	V	I_E=−50μA
Collector cutoff current	I_{CBO}	−	−	−0.1	μA	V_{CB}=−60V
Emitter cutoff current	I_{EBO}	−	−	−0.1	μA	V_{EB}=−6V
Collector-emitter saturation voltage	$V_{CE(sat)}$	−	−	−0.5	V	I_C/I_B=−50mA/−5mA
DC current transfer ratio	h_{FE}	120	−	560	−	V_{CE}=−6V, I_C=−1mA
Transition frequency	f_T	−	140	−	MHz	V_{CE}=−12V, I_E=2mA, f=100MHz ∗
Output capacitance	Cob	−	4	5	pF	V_{CE}=−12V, I_E=0A, f=1MHz

∗Transition frequency of the device.

●**Electrical characteristics curves**

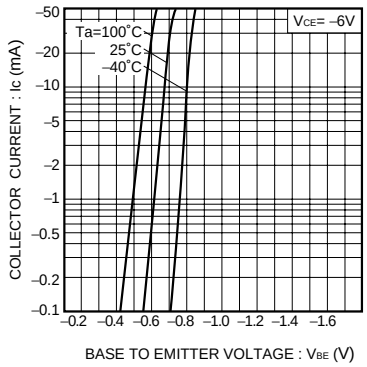


Fig.1 Grounded emitter propagation characteristics

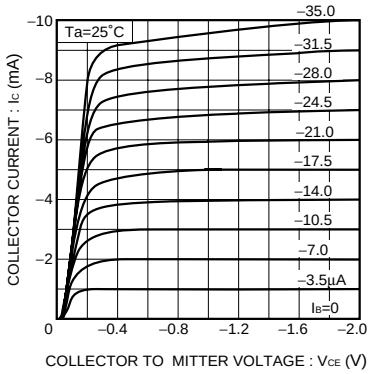


Fig.2 Grounded emitter output characteristics (I)

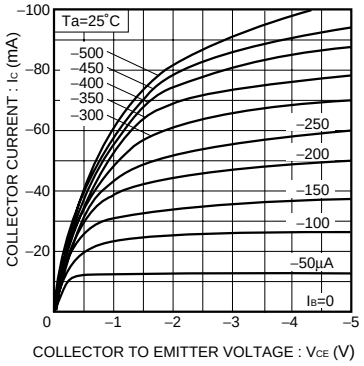


Fig.3 Grounded emitter output characteristics (II)

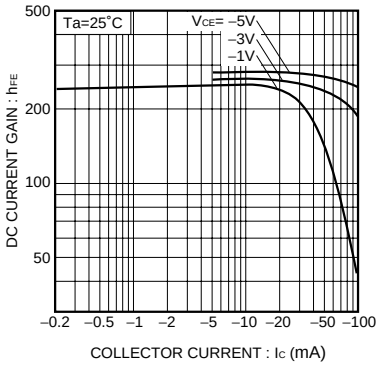


Fig.4 DC current gain vs. collector current (I)

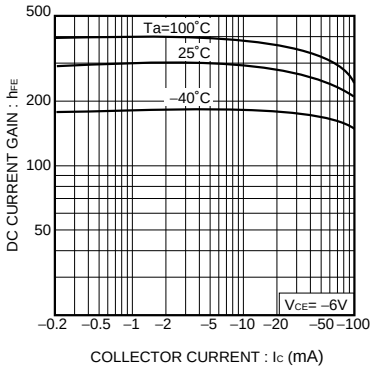


Fig.5 DC current gain vs. collector current (II)

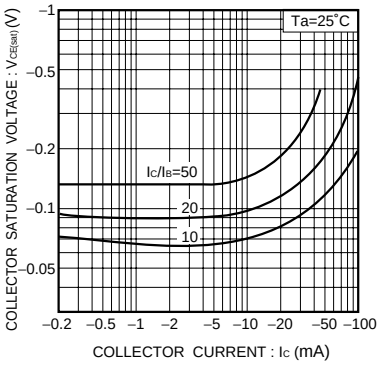


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

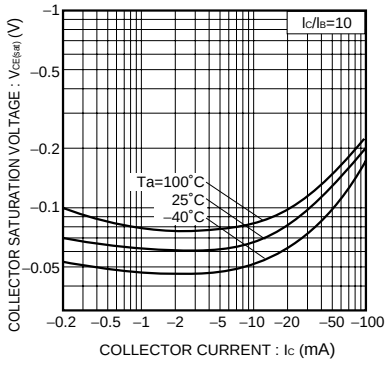


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

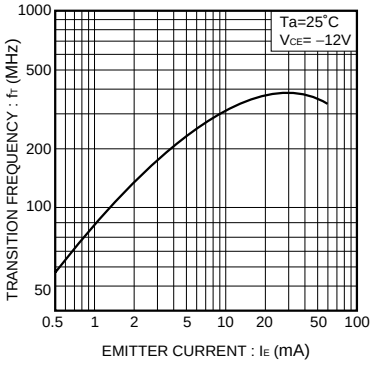


Fig.8 Gain bandwidth product vs. emitter current

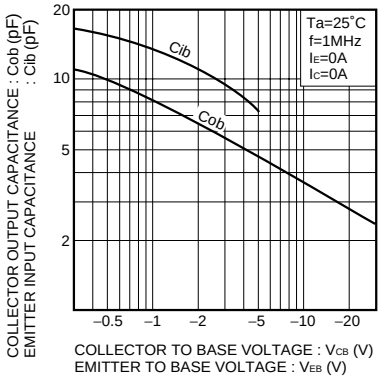


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter inputcapacitance vs. emitter-base voltage

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