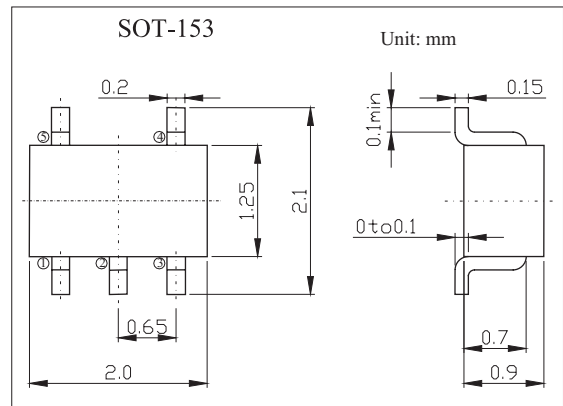
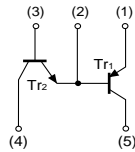


FMY4A

■ Features

- Collector-emitter voltage: Tr1=-50V, Tr2=50V
- Collector current: Tr1=-150mA, Tr2=150mA



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating		Unit
		Tr1	Tr2	
Collector-base voltage	V _{CBO}	-60	60	V
Collector-emitter voltage	V _{CEO}	-50	50	V
Emitter-base voltage	V _{EBO}	-6	7	V
Collector current	I _C	-150	150	mA
Power dissipation(Total)	P _D	300		mW
Operating and Storage and Temperature Range	T _j , T _{STG}	-55 to +150		°C

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Transistor Tr1						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -50 \mu A, I_E = 0$	-60			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1 mA, I_B = 0$	-50			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = -50 \mu A, I_C = 0$	-6			V
Collector cutoff current	I_{CBO}	$V_{CB} = -60V, I_E = 0$			-100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-100	nA
DC current gain	h_{FE}	$V_{CE} = -6V, I_C = -1mA$	120		560	
collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = -50 mA; I_B = -5 mA$			-0.5	V
Transition frequency	f_T	$I_C = -2 mA; V_{CE} = -12 V; f = 100 MHz$		140		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -12V, I_E = 0A, f = 1MHz$			5	pF
Transistor Tr2						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 50 \mu A, I_E = 0$	60			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	50			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = 50 \mu A, I_C = 0$	7			V
Collector cutoff current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 7V, I_C = 0$			100	nA
DC current gain	h_{FE}	$V_{CE} = 6V, I_C = 1mA$	120		560	
collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 50 mA; I_B = 5 mA$			0.4	V
Transition frequency	f_T	$I_C = 2 mA; V_{CE} = 12 V; f = 100 MHz$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 12V, I_E = 0A, f = 1MHz$			3.5	pF

* pulse test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2.0\%$.

■ Marking

Marking	Y4
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■ Typical Characteristics

Tr1 (PNP)

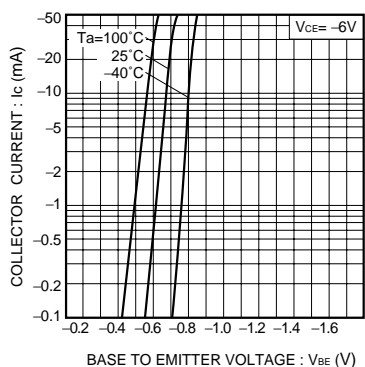


Fig.1 Grounded emitter propagation characteristics

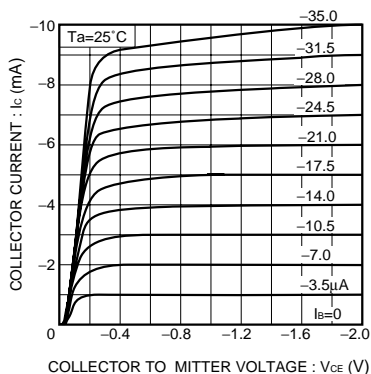


Fig.2 Grounded emitter output characteristics (I)

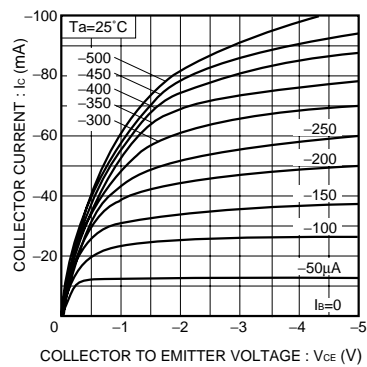


Fig.3 Grounded emitter output characteristics (II)

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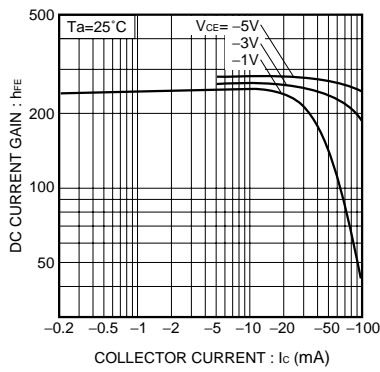


Fig.4 DC current gain vs. collector current (I)

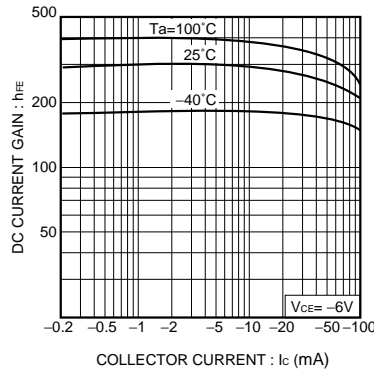


Fig.5 DC current gain vs. collector current (II)

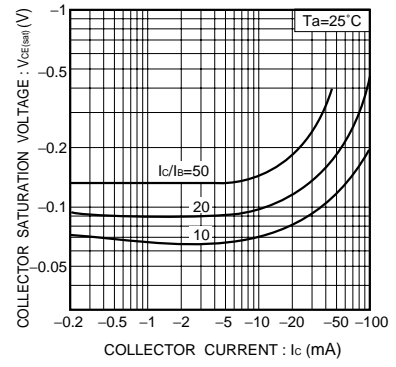


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

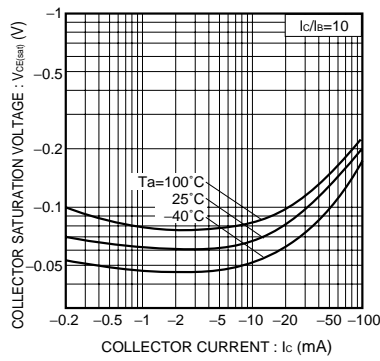


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

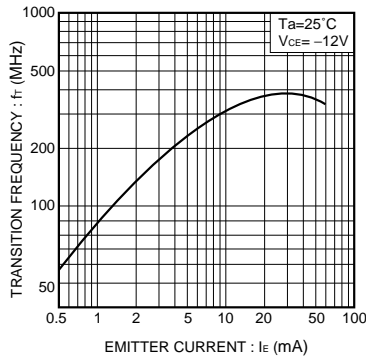


Fig.8 Gain bandwidth product vs. emitter current

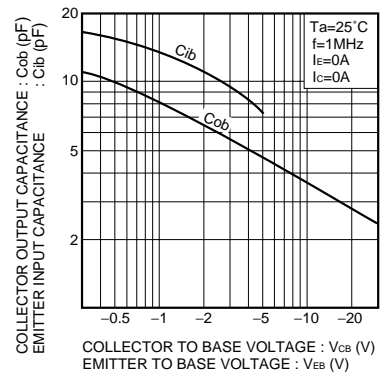


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

NPN Tr

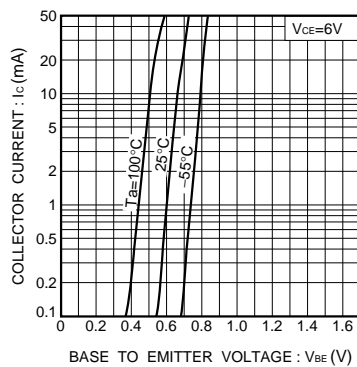


Fig.10 Grounded emitter propagation characteristics

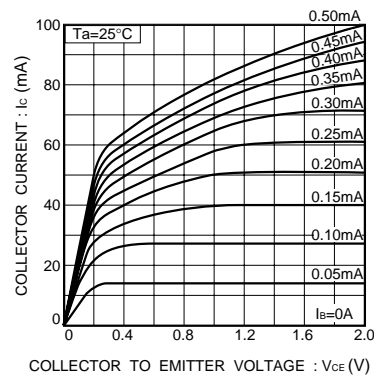


Fig.11 Grounded emitter output characteristics (I)

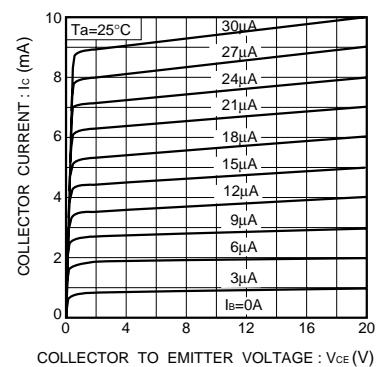


Fig.12 Grounded emitter output characteristics (II)

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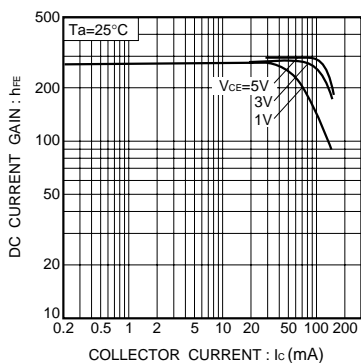


Fig.13 DC current gain vs. collector current (I)

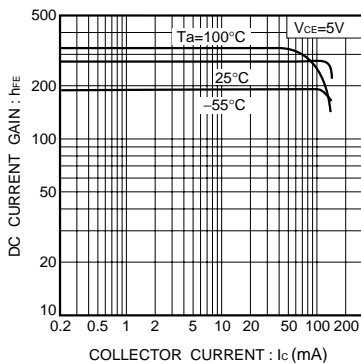


Fig.14 DC current gain vs. collector current (II)

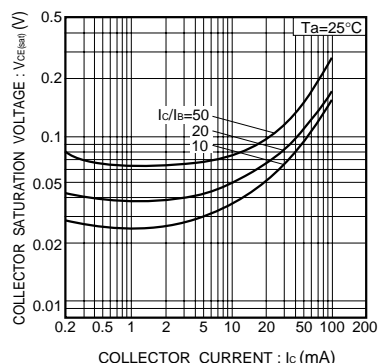


Fig.15 Collector-emitter saturation voltage vs. collector current

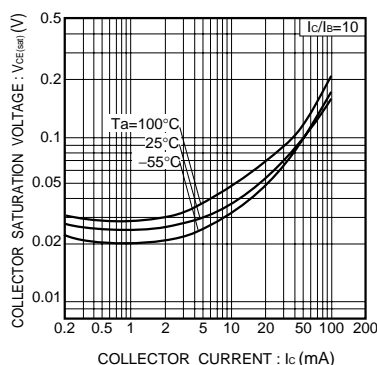


Fig.16 Collector-emitter saturation voltage vs. collector current (I)

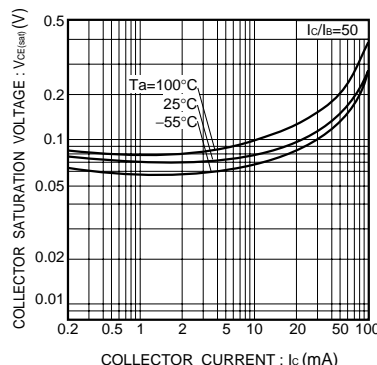


Fig.17 Collector-emitter saturation voltage vs. collector current (II)

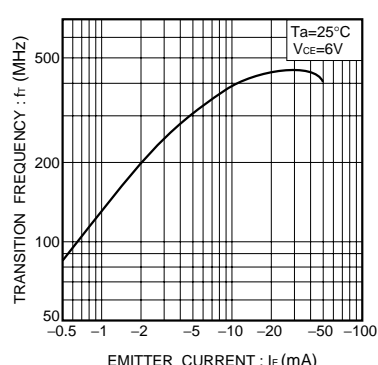


Fig.18 Gain bandwidth product vs. emitter current

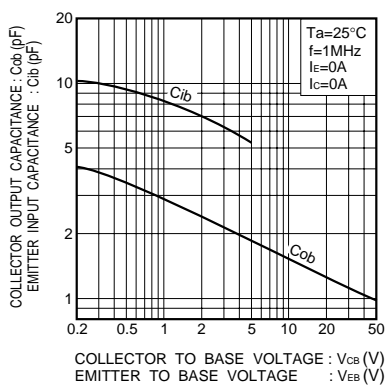


Fig.19 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

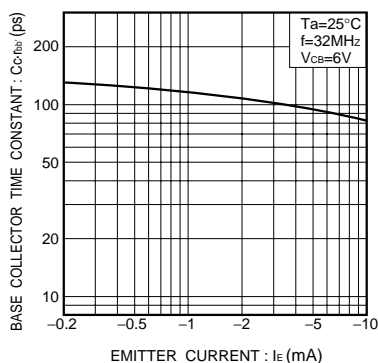


Fig.20 Base-collector time constant vs. emitter current