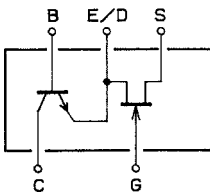


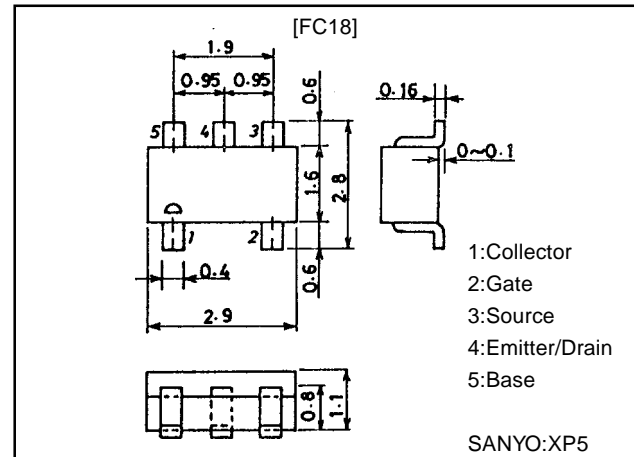
**FC18**TR:NPN Epitaxial Planar Silicon Transistor  
FET:N-Channel Junction Silicon FET**High-Frequency Amp, AM Amp,  
Low-Frequency Amp Applications****Features**

- Composed of 2 chips, one being equivalent to the 2SK2394 and the other the 2SC4639, in the conventional CP package, improving the mounting efficiency greatly.
- Drain and emitter are shared.

**Electrical Connection****Package Dimensions**

unit:mm

2122

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
[FET]				
Drain-to-Source Voltage	$V_{DSX}$		15	V
Gate-to-Drain Voltage	$V_{GD S}$		-15	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		50	mA
Allowable Power Dissipation	$P_D$		200	mW
[TR]				
Collector-to-Base Voltage	$V_{CBO}$		55	V
Collector-to-Emitter Voltage	$V_{CEO}$		50	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		150	mA
Collector Current (Pulse)	$I_{CP}$		300	mA
Base Current	$I_B$		30	mA
Collector Dissipation	$P_C$		200	mW
[Common Ratings]				
Total Dissipation	$P_T$		300	mW
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

· Marking:18

Continued on next page.

# FC18

Continued from preceding page.

## Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[FET]						
G-D Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A, V_{DS} = 0$	-15			V
Gate Cutoff Current	$I_{GSS}$	$V_{GS} = -10V, V_{DS} = 0$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 100\mu A$	-0.3	-0.7	-1.5	V
Drain Current	$I_{DSS}$	$V_{DS} = 5V, V_{GS} = 0$	6.0*		32.0*	mA
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	20	38		mS
Input Capacitance	$C_{iss}$	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		10.0		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		2.9		pF
Noise Figure	NF	$V_{DS} = 5V, R_g = 1k\Omega, I_D = 1mA, f = 1kHz$		1.0		dB
[TR]						
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 35V, I_E = 0$			0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$			0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 6V, I_C = 1mA$	135		400	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 6V, I_C = 10mA$		200		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 6V, f = 1MHz$		1.7		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 5mA$		0.08	0.4	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 50mA, I_B = 5mA$		0.8	1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	55			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6			V
Turn-ON Time	$t_{on}$	See specified Test Circuit		0.15		$\mu s$
Storage Time	$t_{stg}$	See specified Test Circuit		0.75		$\mu s$
Fall Time	$t_f$	See specified Test Circuit		0.20		$\mu s$

Note\*: The FC18 is classified by  $I_{DSS}$  as follows : (unit: mA)

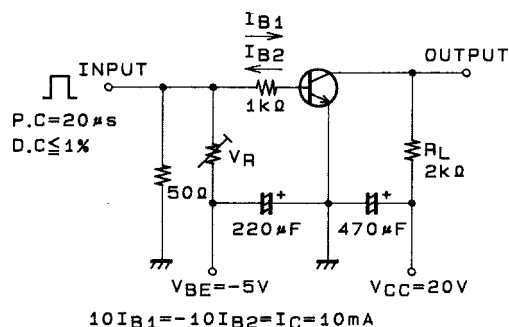
6.0 F 120	10.0 G 20.0	16.0 H 32.0
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Marking: 18

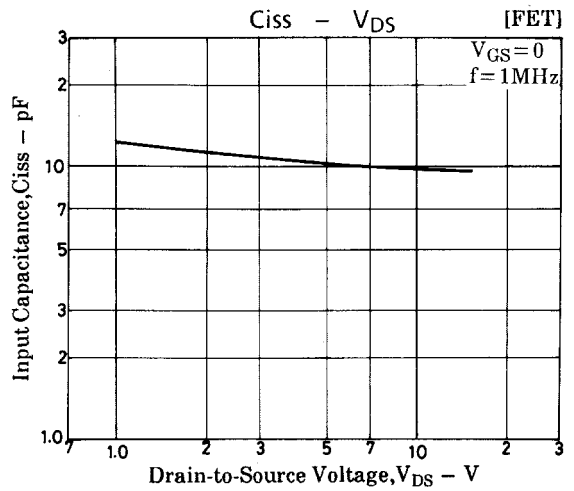
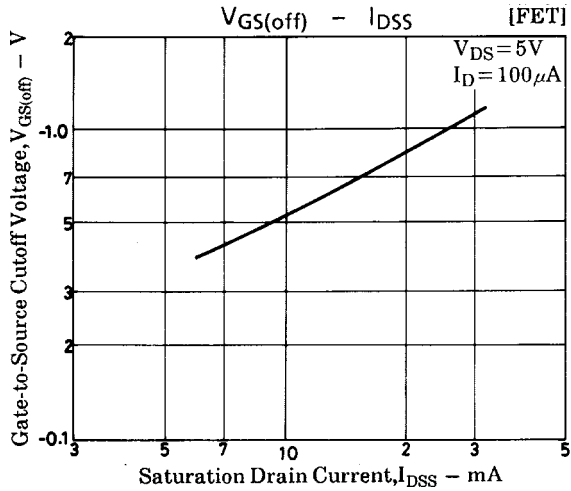
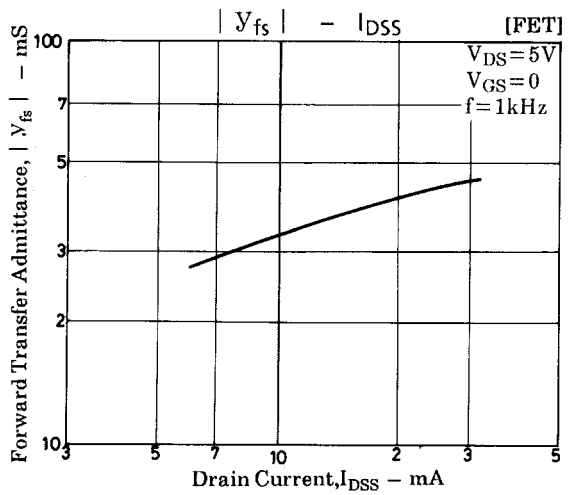
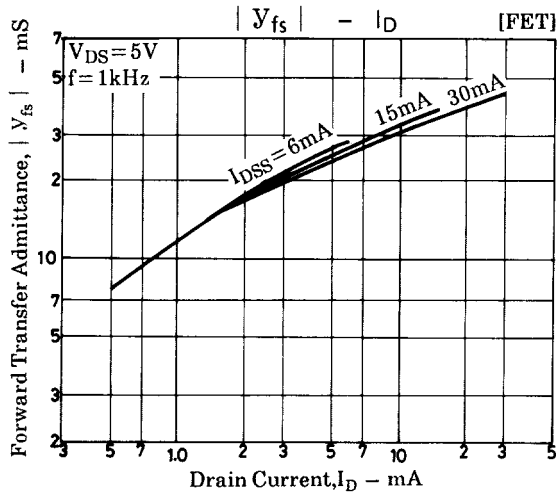
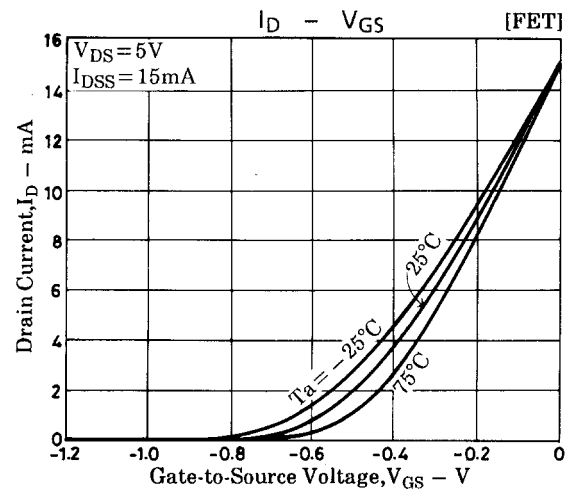
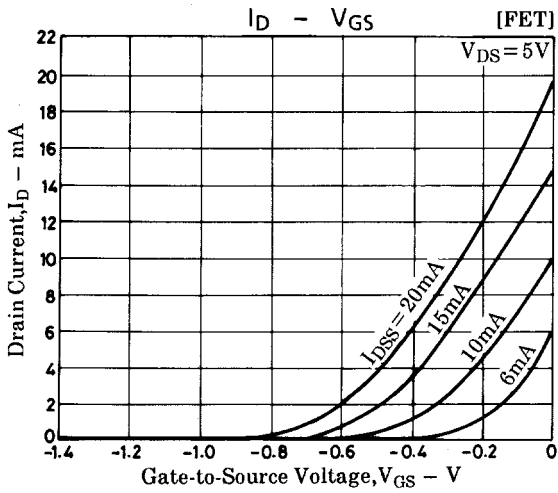
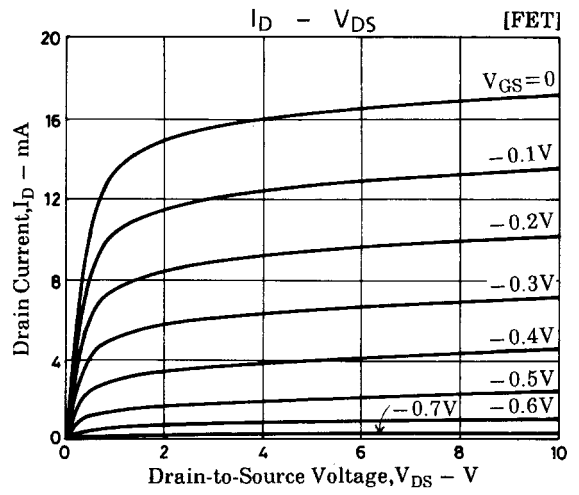
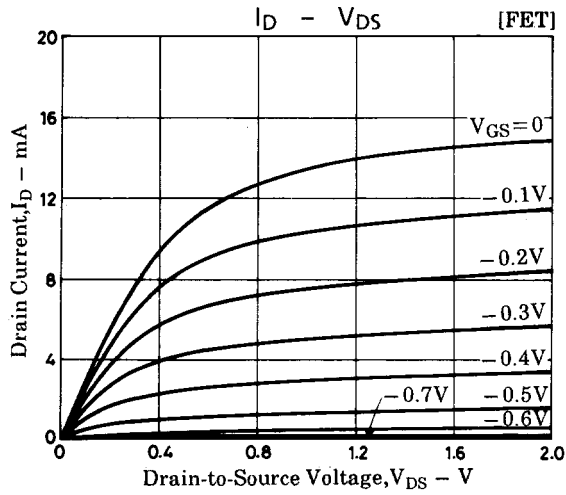
$I_{DSS}$  rank: F, G, H

The specifications shown above are for each individual FET or transistor.

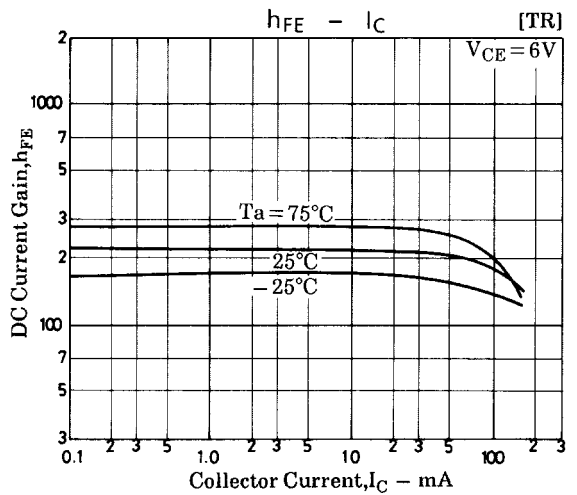
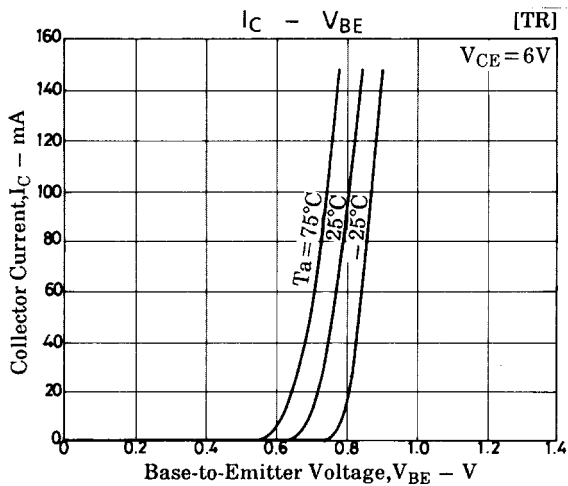
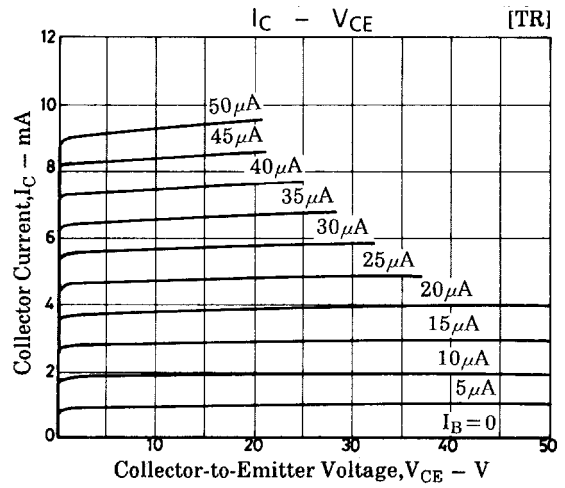
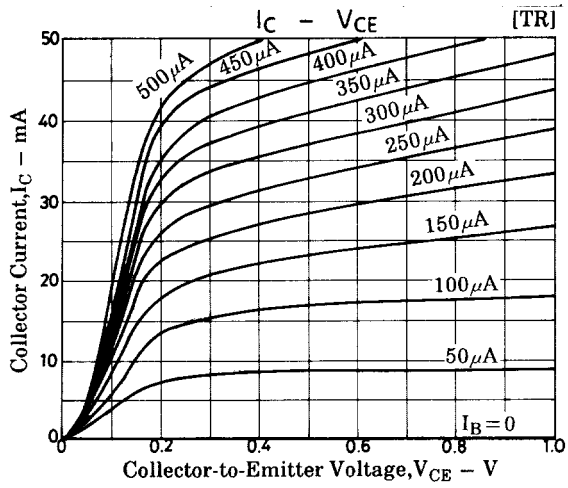
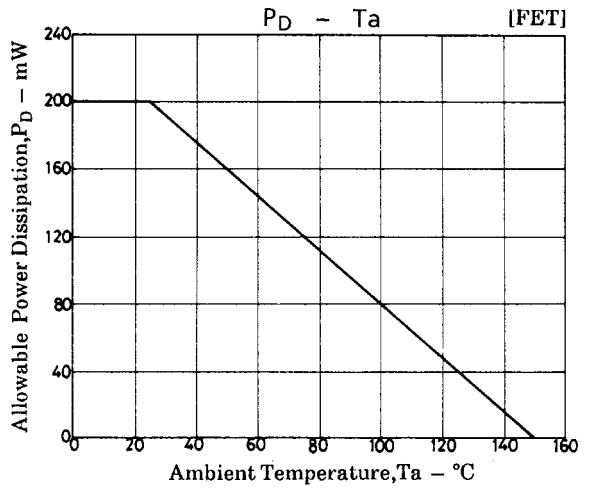
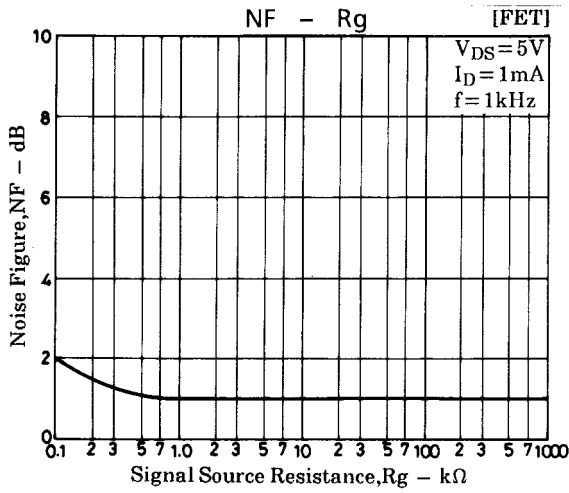
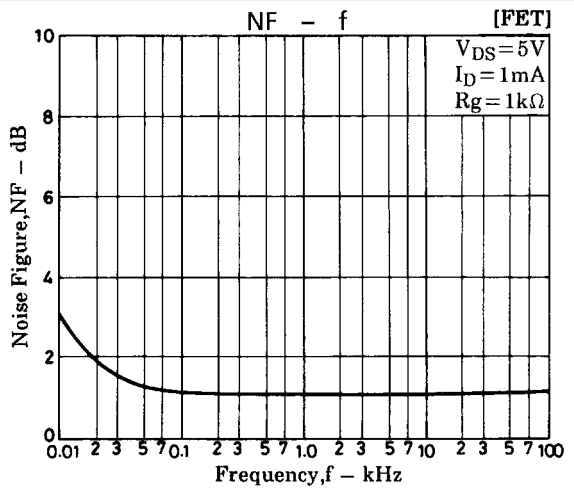
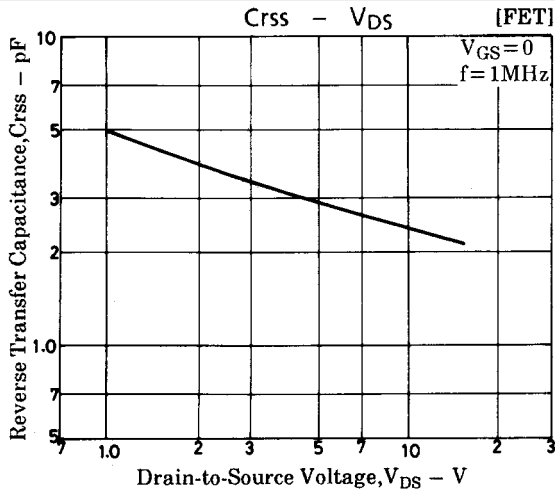
## Switching Time Test Circuit



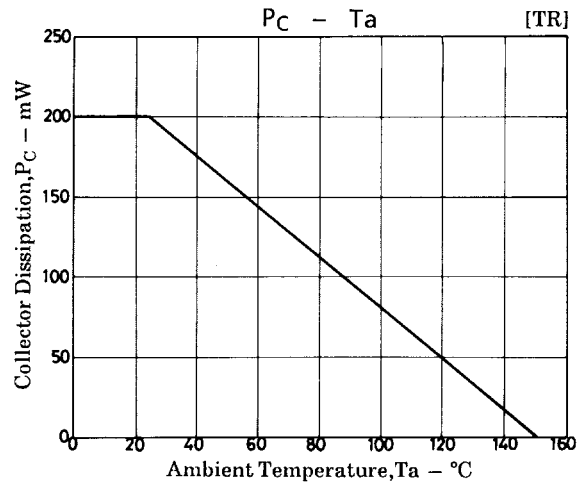
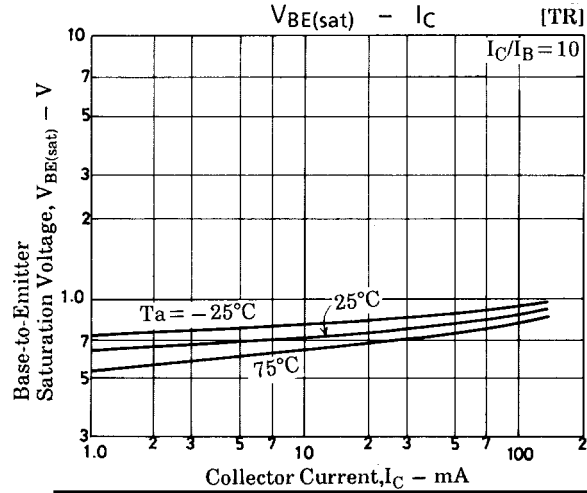
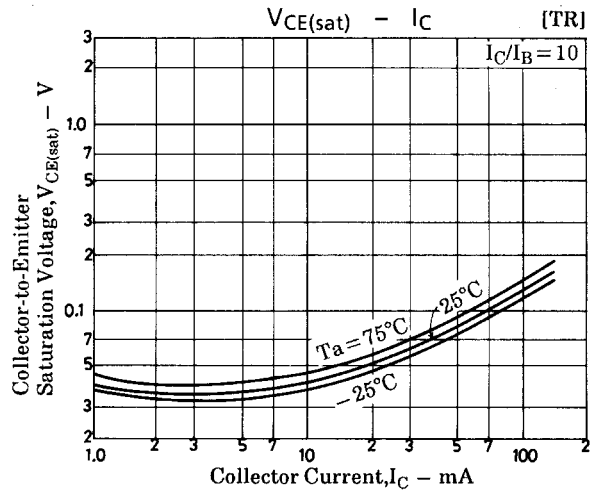
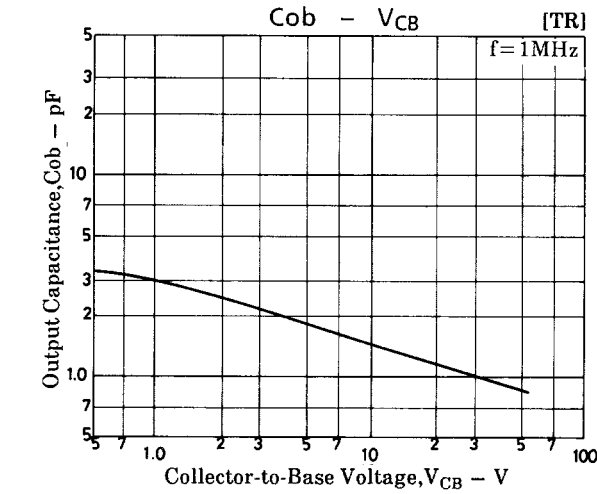
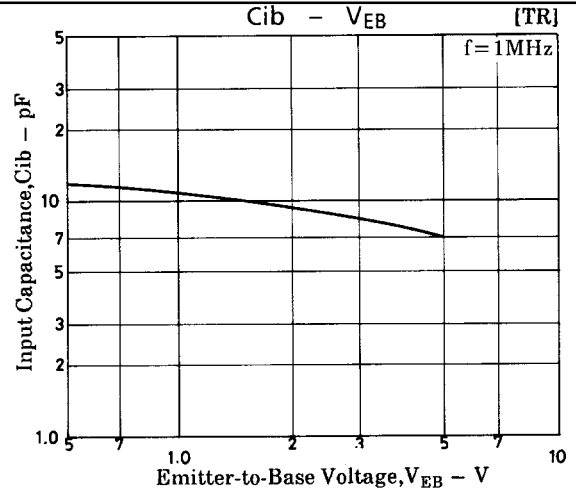
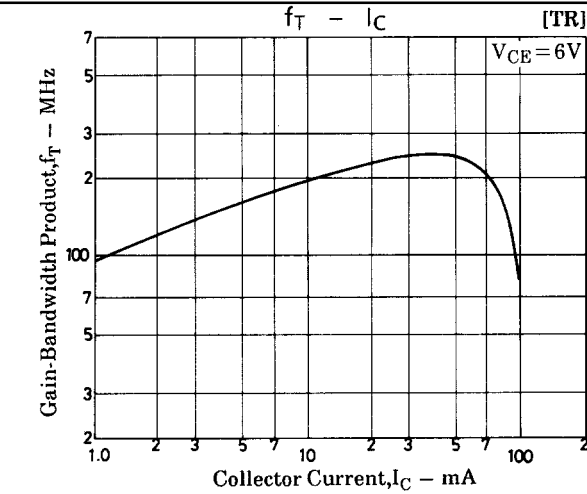
# FC18



# FC18



# FC18



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