

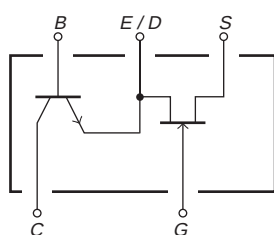
**FC18**

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.

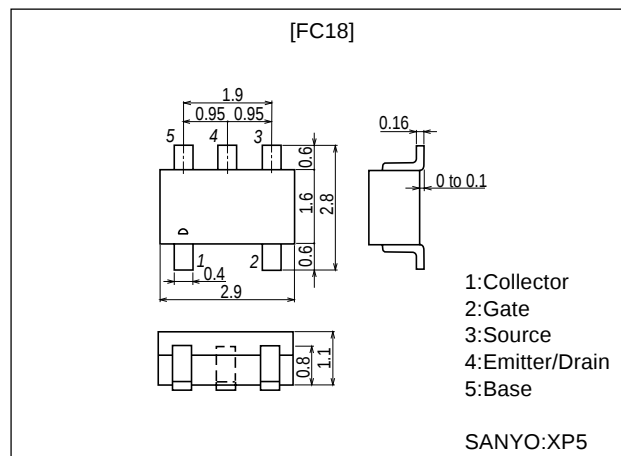
Electrical Connection



Package Dimensions

unit:mm

2122



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
[FET]				
Drain-to-Source Voltage	V_{DSX}		15	V
Gate-to-Drain Voltage	V_{GDS}		-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	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

· Marking:18

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

72101TN (KT)/52098HA (KT)/42695MO(KOTO) BX-1576 No.4983-1/6

FC18

Continued from preceding page.

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[FET]						
G-D Breakdown Voltage	V _{(BR)GDS}	I _G =−10μA, 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 =100μA	−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 =1kΩ, I _D =1mA, f=1kHz		1.0		dB
[TR]						
Collector Cutoff Current	I _{CBO}	V _{CB} =35V, I _E =0			0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			0.1	μA
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 =10μA, I _E =0	55			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	50			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6			V
Turn-ON Time	t _{on}	See specified Test Circuit		0.15		μs
Storage Time	t _{stg}	See specified Test Circuit		0.75		μs
Fall Time	t _f	See specified Test Circuit		0.20		μs

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

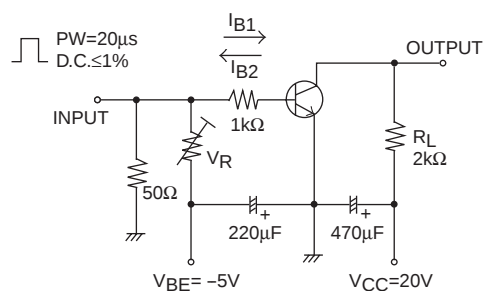
6.0	F	120	10.0	G	20.0	16.0	H	32.0
-----	---	-----	------	---	------	------	---	------

Marking: 18

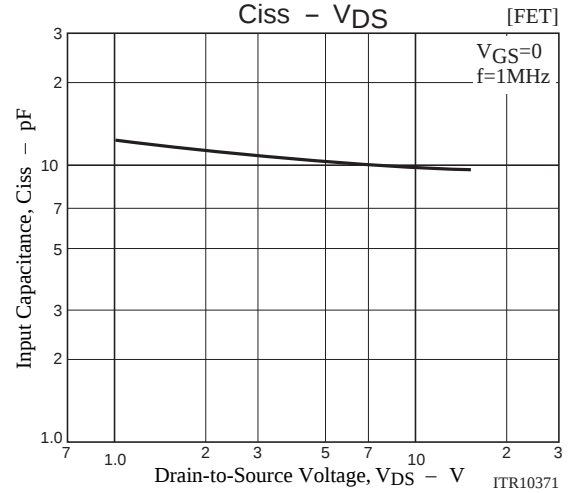
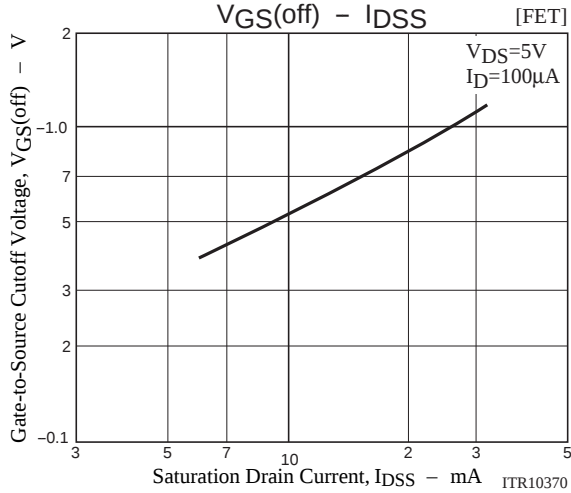
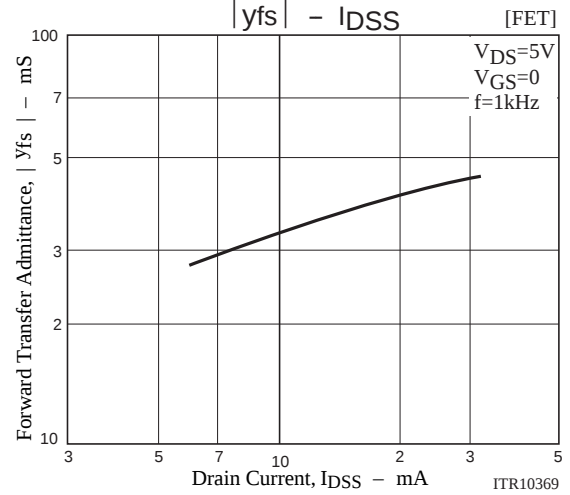
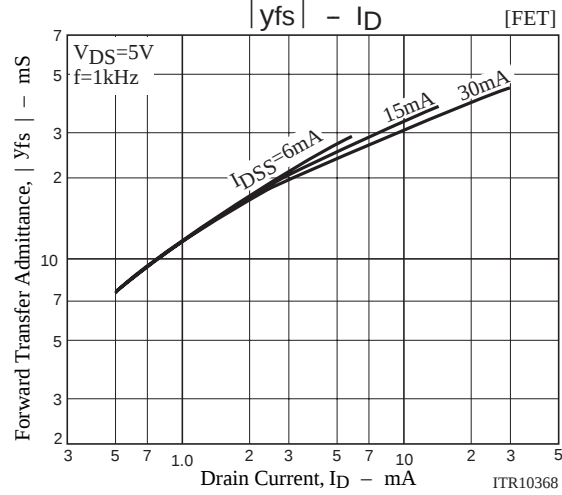
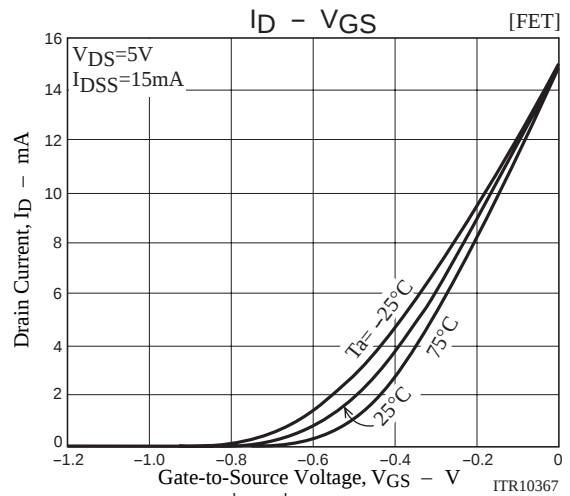
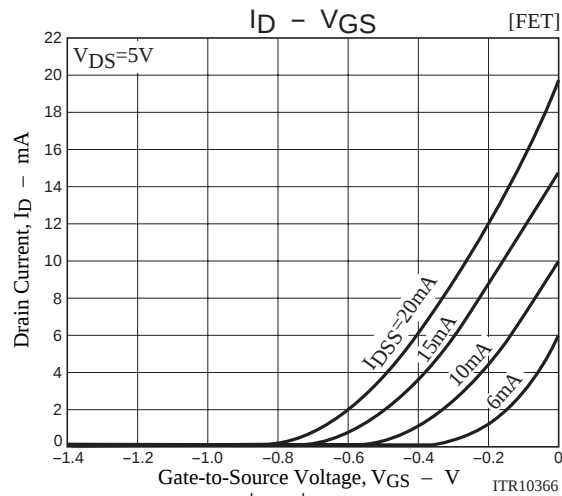
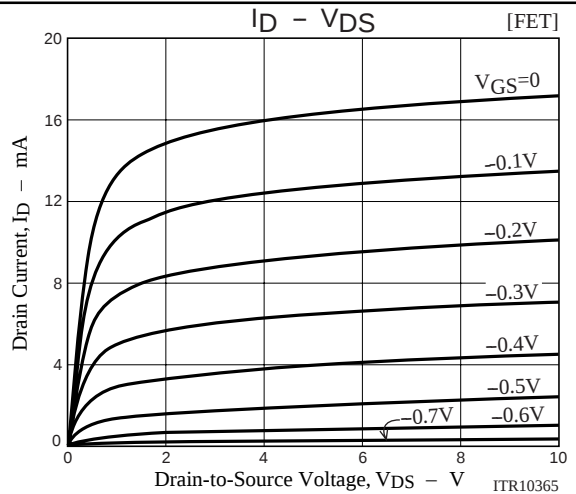
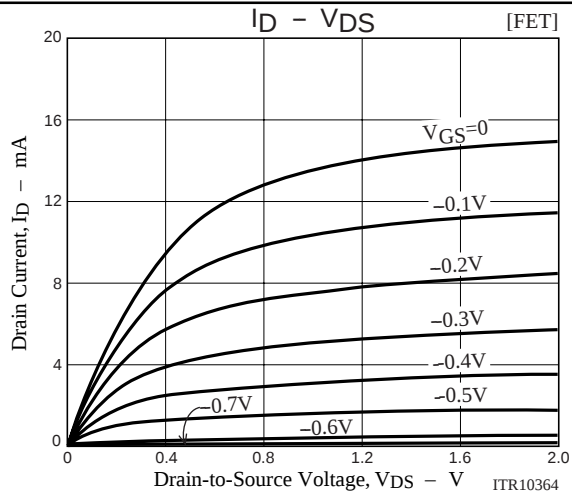
I_{DSS} rank: F, G, H

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

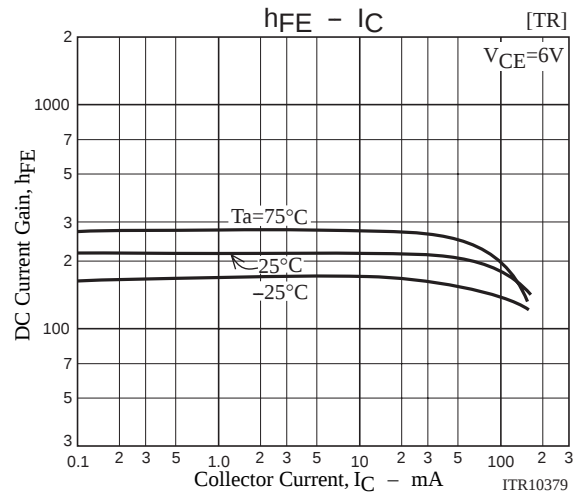
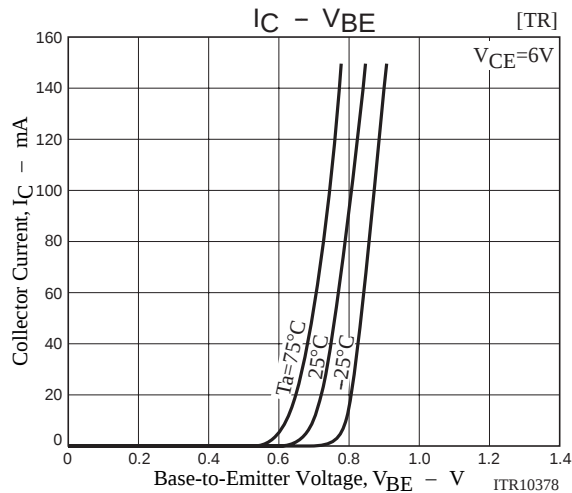
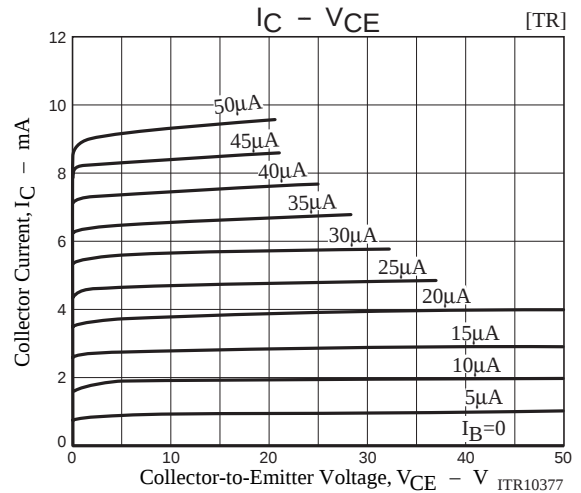
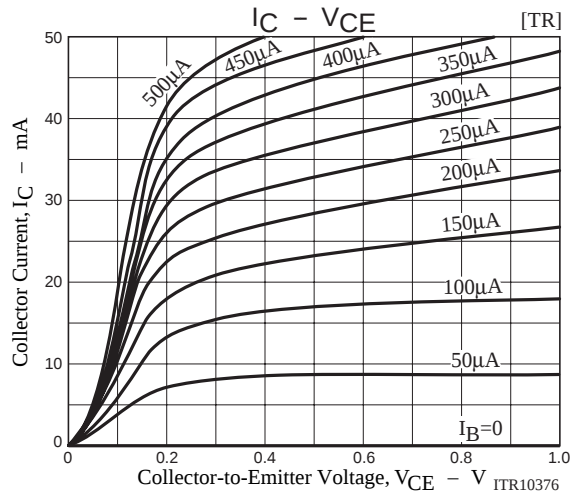
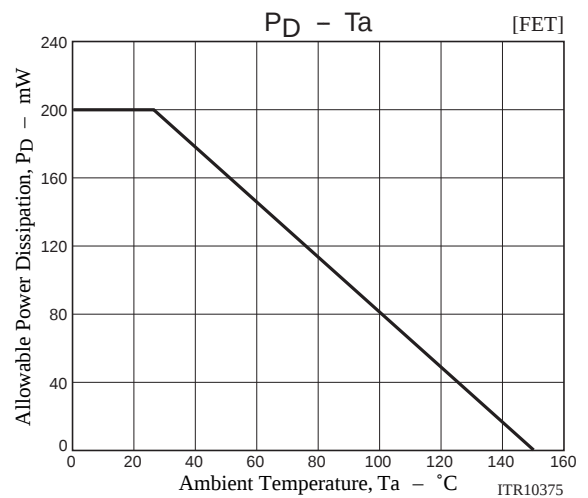
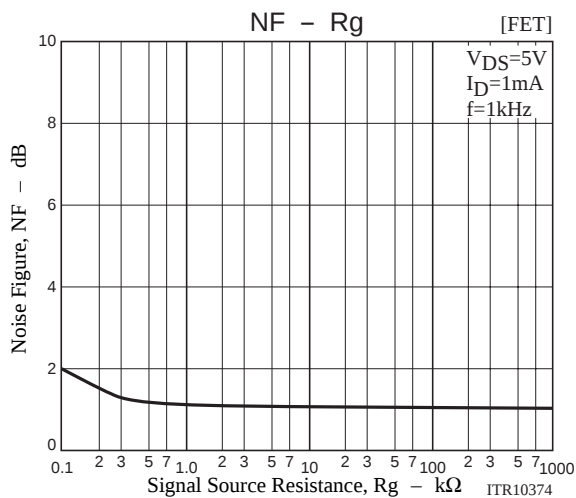
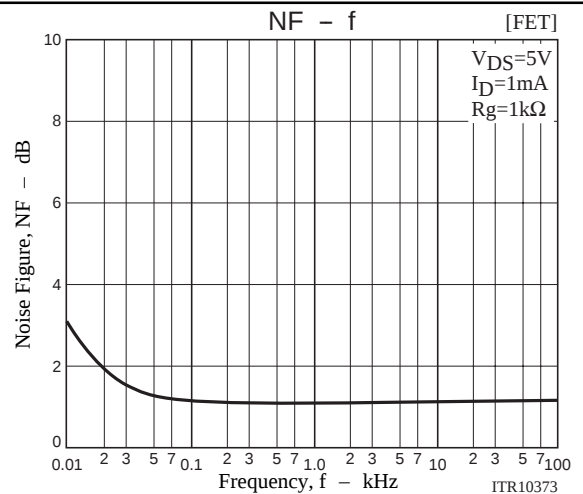
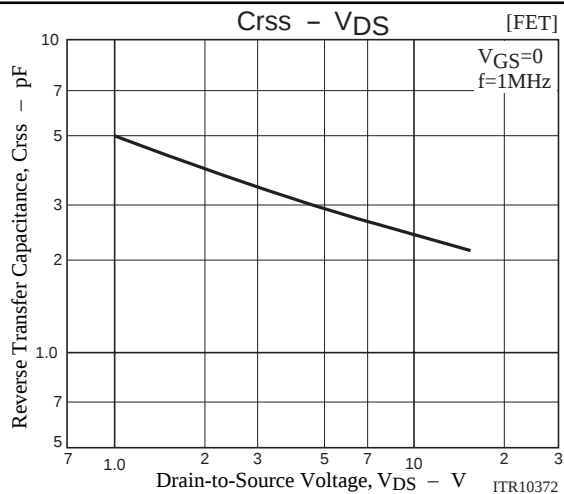
Switching Time Test Circuit

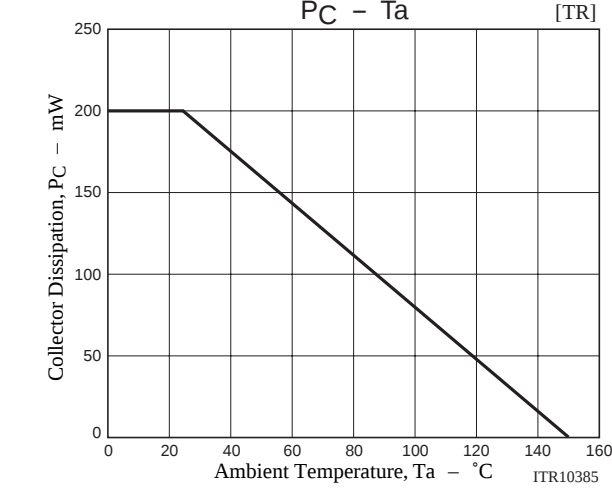
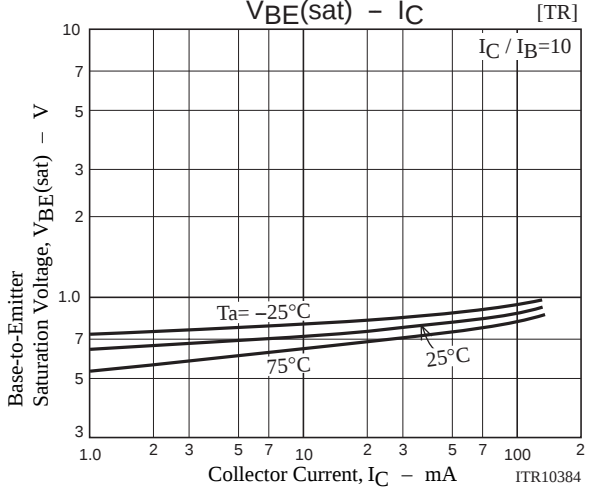
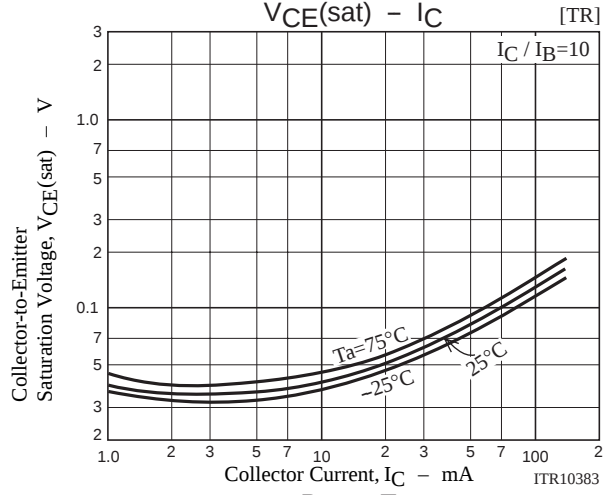
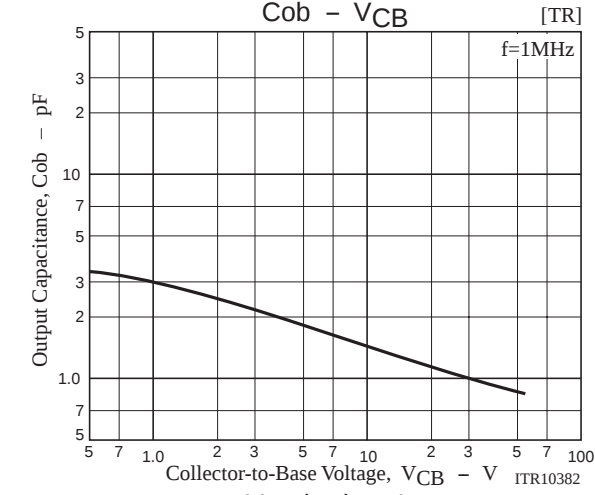
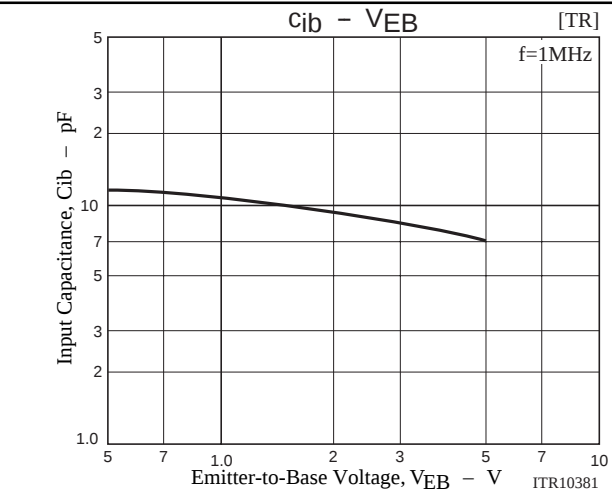
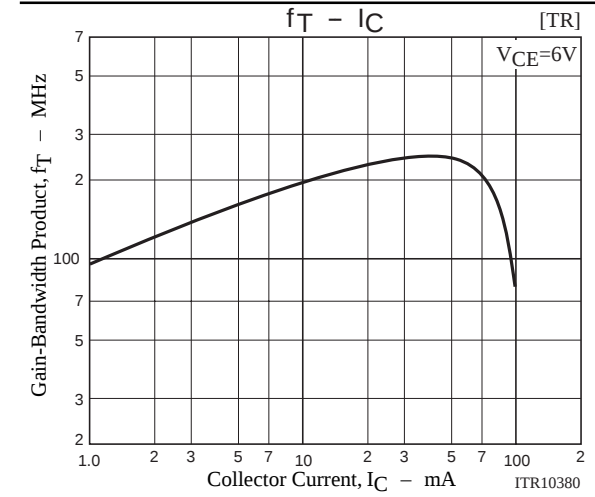


$$10I_{B1} = -10I_{B2} = I_C = 10\text{mA}$$



FC18





- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all SANYO products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of July, 2001. Specifications and information herein are subject to change without notice.