

9097250 TOSHIBA (DISCRETE/OPTO)

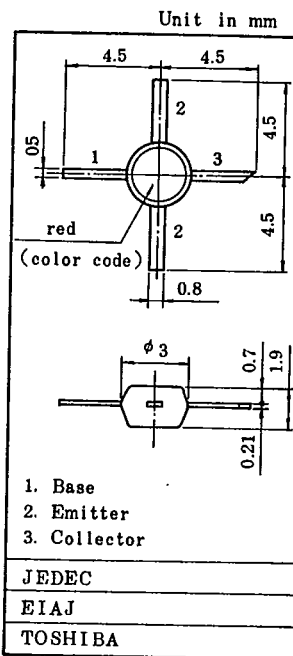
2SC241839C 00395 D T-31-17
マイクロモールドトランジスタ

- UHF~Cバンド低雑音増幅用
- UHF~C Band Low Noise Amplifier Applications
- 高速度スイッチング用
- High Speed Switching Applications

- $f_T = 7 \text{ GHz}$
- $|S_{21e}| = 7 \text{ dB}$ ($f = 2 \text{ GHz}$)

最大定格 MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
コレクタ・ベース間電圧	V_{CB0}	15	V
コレクタ・エミッタ間電圧	V_{CE0}	8	V
エミッタ・ベース間電圧	V_{EB0}	3	V
コレクタ電流	I_C	80	mA
エミッタ電流	I_E	-80	mA
コレクタ損失 ($T_c = 25^\circ\text{C}$)	P_C	330	mW
コレクタ損失 ($T_c = 75^\circ\text{C}$)	P_C	300	mW
接合部温度	T_j	125	$^\circ\text{C}$
保存温度	T_{stg}	-55~125	$^\circ\text{C}$

マイクロ波特性 MICROWAVE CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
トランジション周波数	f_T	$V_{CE} = 5 \text{ V}$ $I_C = 30 \text{ mA}$	—	7.0	—	GHz
挿入電力利得	$ S_{21e} ^2$	$V_{CE} = 5 \text{ V}$ $I_C = 30 \text{ mA}$, $f = 2 \text{ GHz}$	—	7.0	—	dB
		$V_{CE} = 3 \text{ V}$ $I_C = 50 \text{ mA}$, $f = 2 \text{ GHz}$	—	6.5	—	dB
雑音指数	NF	$V_{CE} = 5 \text{ V}$ $I_C = 10 \text{ mA}$, $f = 2 \text{ GHz}$	—	4.0	—	dB

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2SC2418電気的特性 ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
コレクタシャ断電流	I_{CB0}	$V_{CB}=10\text{V}, I_E=0$	—	—	0.1	μA
エミッタシャ断電流	I_{EB0}	$V_{EB}=2\text{V}, I_C=0$	—	—	1.0	μA
直流電流増幅率	h_{FE}	$V_{CE}=3\text{V}, I_C=50\text{mA}$	30	75	—	—
コレクタ・エミッタ間飽和電圧	$V_{CE}(\text{sat})$	$I_C=30\text{mA}, I_B=3\text{mA}$	—	0.25	—	V
ベース・エミッタ間飽和電圧	$V_{BE}(\text{sat})$	$I_C=30\text{mA}, I_B=3\text{mA}$	—	0.87	—	V
コレクタ出力容量	C_{ob}	$V_{CB}=5\text{V}, I_E=0$	—	1.25	1.6	pF
帰還容量	C_{re}	$f=1\text{MHz}$ (Note 1)	—	0.9	—	pF
入力容量	C_{ib}	$V_{EB}=0$ $I_C=0, f=1\text{MHz}$	—	1.8	—	pF

Note 1 C_{re} はBoonton Electronics Corp. 製 750 Direct Capacitance Bridge によって三端子法で測定

C_{re} is Measured by 3 Terminal Method with Boonton Electronics Corp. 750 Direct Capacitance Bridge

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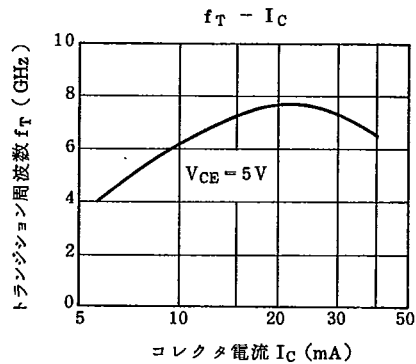
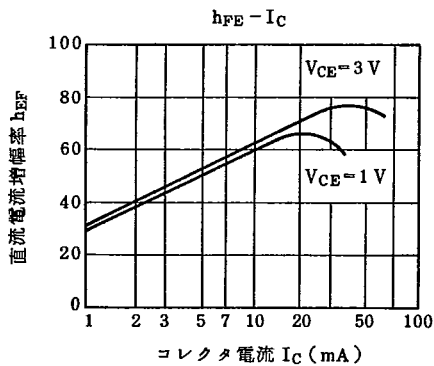
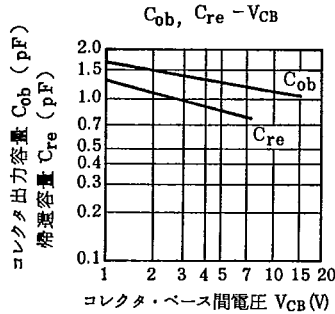
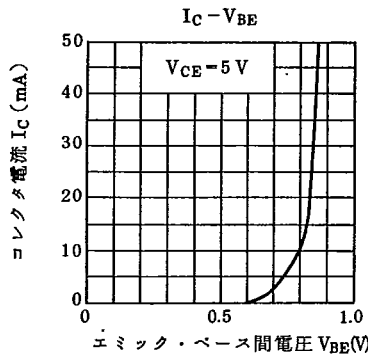
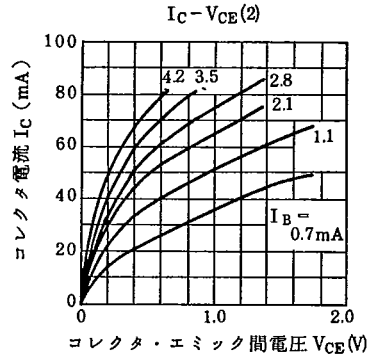
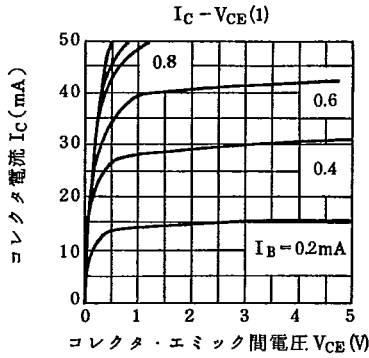
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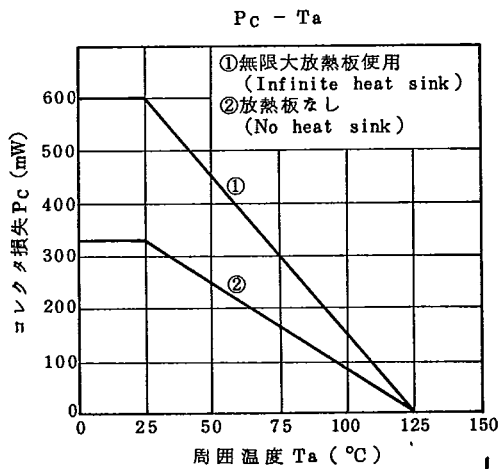
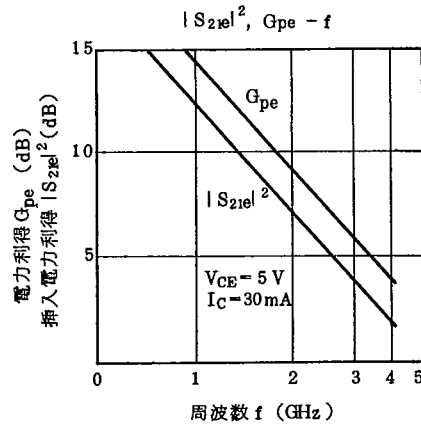
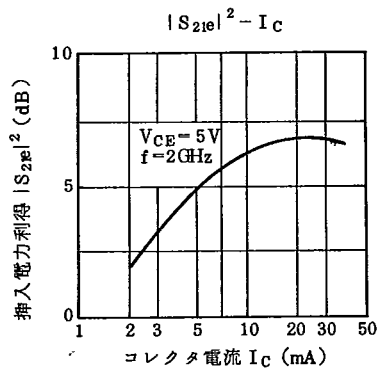
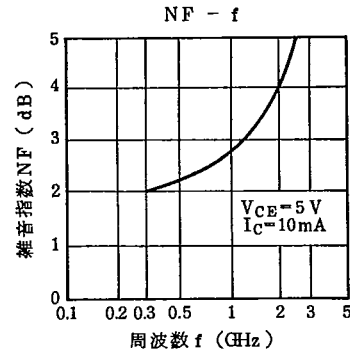
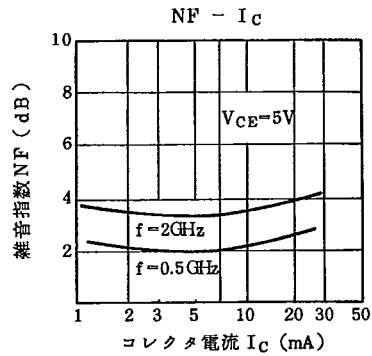
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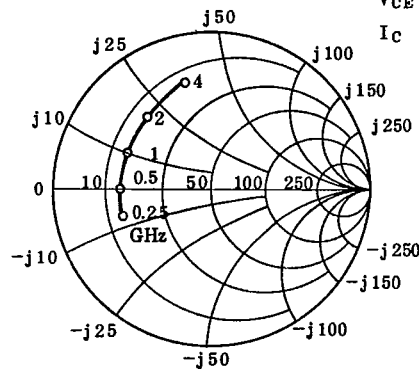
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39C 00399 D T-31-17

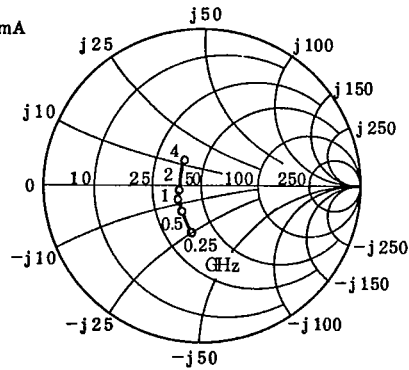
2SC2418のエミッタ接地, 小信号Sパラメータ

COMMON EMITTER SMALL SIGNAL S-PARAMETERS OF 2SC2418

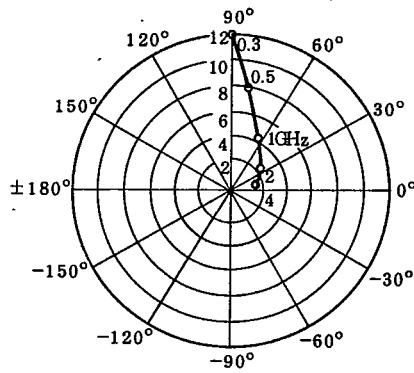
$V_{CE} = 5V$
 $I_C = 30mA$



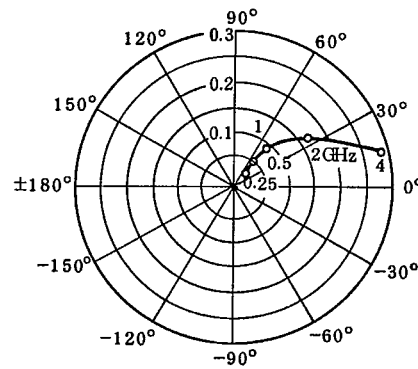
S_{11e}
(Unit in Ω)



S_{22e}
(Unit in Ω)



S_{21e}



S_{12e}

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