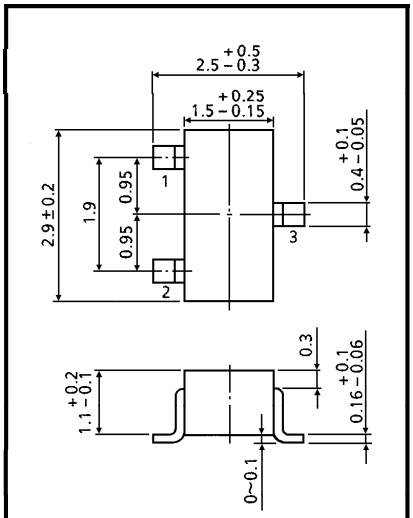
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

RN2421, RN2422, RN2423, RN2424 RN2425, RN2426, RN2427

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATIONS

- High Current Type ($I_{C\,(Max.)} = -800mA$)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts Manufacturing Process
- Low $V_{CE\,(sat)}$
- Complementary to RN1421~1427

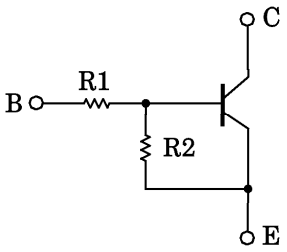
Unit in mm



JEDEC	—
EIAJ	SC-59
TOSHIBA	2-3F1A

Weight : 0.012g

EQUIVALENT CIRCUIT AND BIAS RESISTOR VALUES



TYPE No.	R1 (kΩ)	R2 (kΩ)
RN2421	1	1
RN2422	2.2	2.2
RN2423	4.7	4.7
RN2424	10	10
RN2425	0.47	10
RN2426	1	10
RN2427	2.2	10

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	RN2421~2427	V_{CBO}	−50	V
Collector-Emitter Voltage	RN2421~2427	V_{CEO}	−50	V
Emitter-Base Voltage	RN2421~2424	V_{EBO}	−10	V
	RN2425, 2426		−5	
	RN2427		−6	
Collector Current	RN2421~2427	I_C	−800	mA
Collector Power Dissipation	RN2421~2427	P_C	200	mW
Junction Temperature	RN2421~2427	T_j	150	°C
Storage Temperature Range	RN2421~2427	T_{stg}	−55~150	°C

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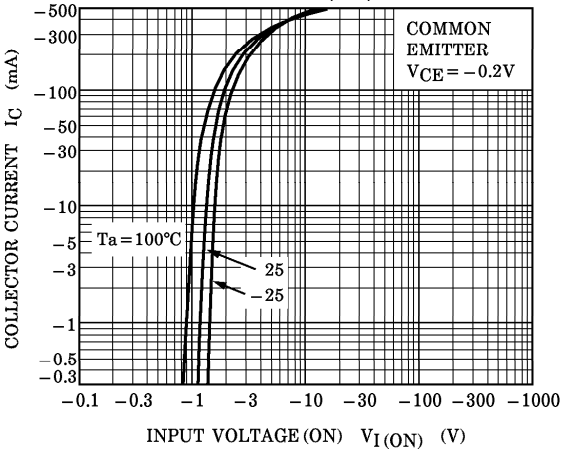
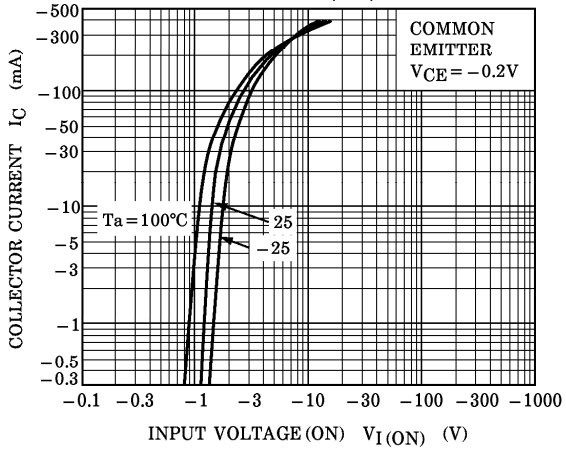
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	RN2421~2427	I_{CBO}	$V_{CB}=-50V$, $I_E=0$	—	—	−100	nA
		I_{CEO}	$V_{CE}=-50V$, $I_B=0$	—	—	−500	
Emitter Cut-off Current	RN2421	I_{EBO}	$V_{EB}=-10V$, $I_E=0$	−3.85	—	−7.14	mA
	RN2422			−1.75	—	−3.25	
	RN2423			−0.82	—	−1.52	
	RN2424			−0.38	—	−0.71	
	RN2425		$V_{EB}=-5V$, $I_C=0$	−0.365	—	−0.682	
	RN2426			−0.35	—	−0.65	
	RN2427		$V_{EB}=-6V$, $I_C=0$	−0.378	—	−0.703	
DC Current Gain	RN2421	h_{FE}	$V_{CE}=-1V$, $I_C=-100mA$	60	—	—	—
	RN2422			65	—	—	
	RN2423			70	—	—	
	RN2424			90	—	—	
	RN2425			90	—	—	
	RN2426			90	—	—	
	RN2427			90	—	—	
Collector-Emitter Saturation Voltage	RN2421	$V_{CE\ (sat)}$	$I_C=-50mA$, $I_B=-2mA$	—	—	−0.25	V
	RN2422~2427		$I_C=-50mA$, $I_B=-1mA$				
Input Voltage (ON)	RN2421	$V_{I\ (ON)}$	$V_{CE}=-0.2V$, $I_C=-100mA$	−1.0	—	−3.5	V
	RN2422			−1.4	—	−4.5	
	RN2423			−2.0	—	−6.5	
	RN2424			−3.0	—	−12	
	RN2425			−0.6	—	−2.0	
	RN2426			−0.7	—	−2.5	
	RN2427			−1.0	—	−3.0	
Input Voltage (OFF)	RN2421~2424	$V_{I\ (OFF)}$	$V_{CE}=-5V$, $I_C=-0.1mA$	−0.8	—	−1.3	V
	RN2425, 2426			−0.4	—	−0.8	
	RN2427			−0.5	—	−1.0	
Transition Frequency	RN2421~2427	f_T	$V_{CE}=-5V$, $I_C=-20mA$	—	200	—	MHz
Collector Output Capacitance	RN2421~2427	C_{ob}	$V_{CB}=-10V$, $I_E=0$, f=1MHz	—	13	—	pF
Input Resistor	RN2421	R1		0.7	1.0	1.3	kΩ
	RN2422			1.54	2.2	2.86	
	RN2423			3.29	4.7	6.11	
	RN2424			7	10	13	
	RN2425			0.329	0.47	0.61	
	RN2426			0.7	1.0	1.3	
	RN2427			1.54	2.2	2.86	
Input Ratio	RN2421~2424	R1 / R2		0.9	1.0	1.1	—
	RN2425			0.0423	0.047	0.0517	
	RN2426			0.09	0.1	0.11	
	RN2427			0.2	0.22	0.24	

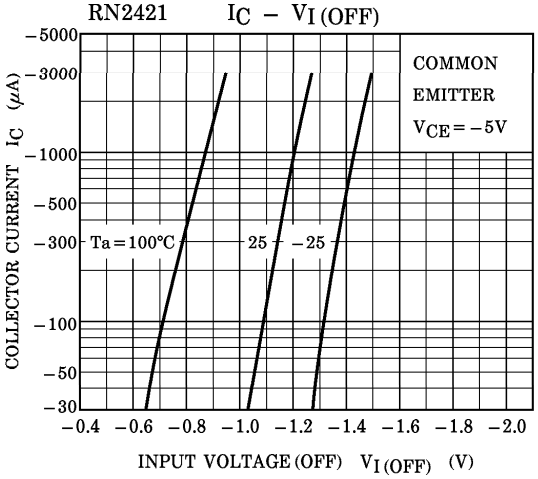
RN2421 $I_C - V_{I(ON)}$



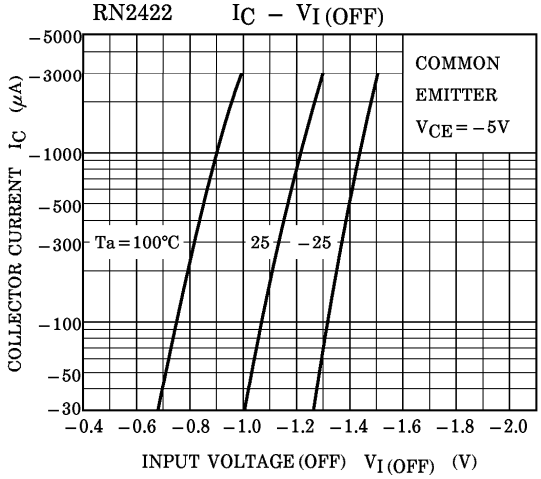
RN2422 $I_C - V_{I(ON)}$



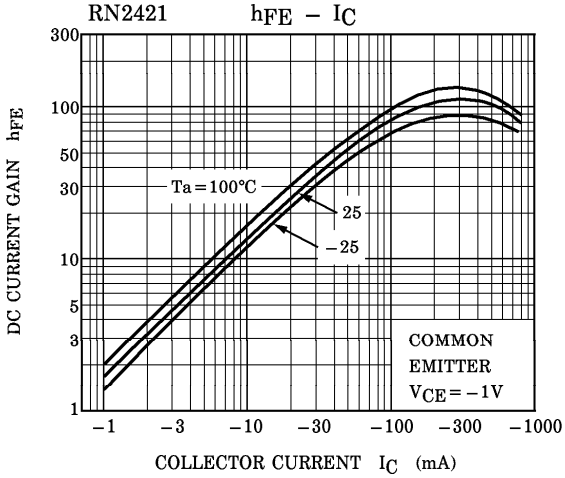
RN2421 $I_C - V_{I(OFF)}$



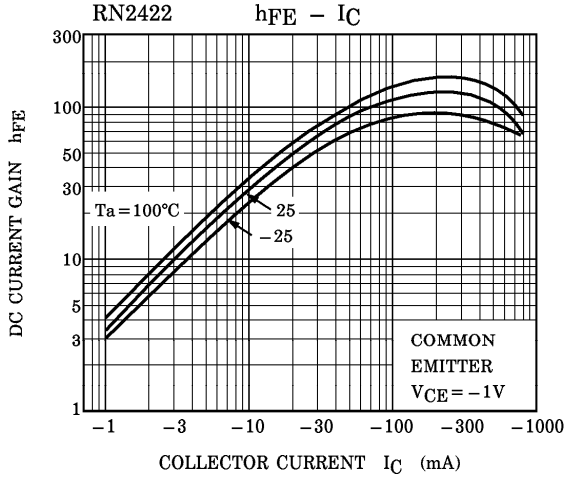
RN2422 $I_C - V_{I(OFF)}$



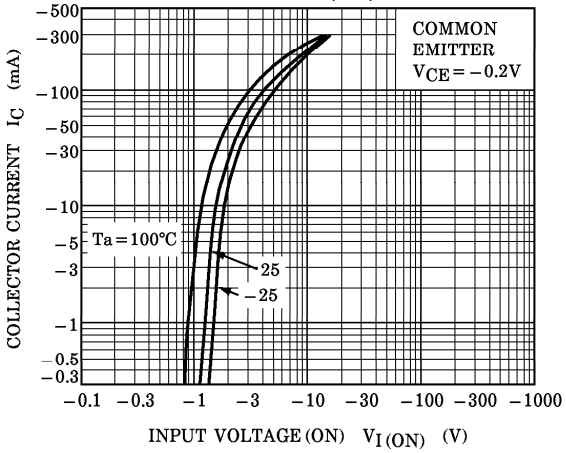
RN2421 $h_{FE} - I_C$



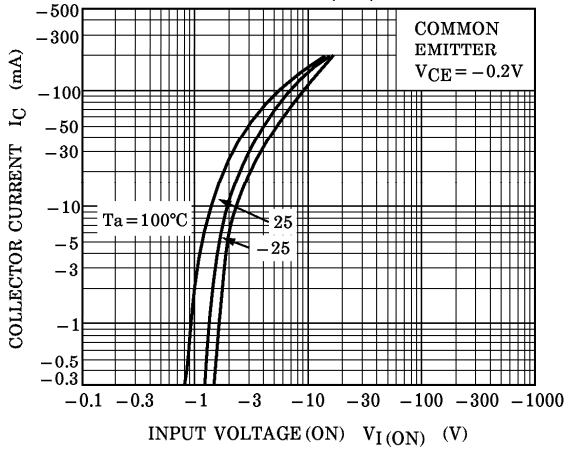
RN2422 $h_{FE} - I_C$



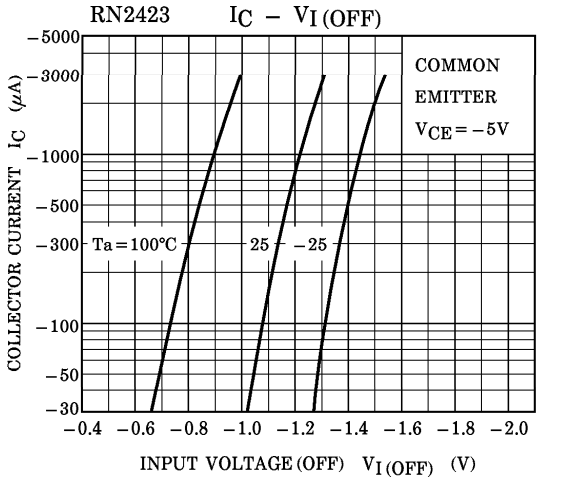
RN2423 $I_C - V_{I(ON)}$



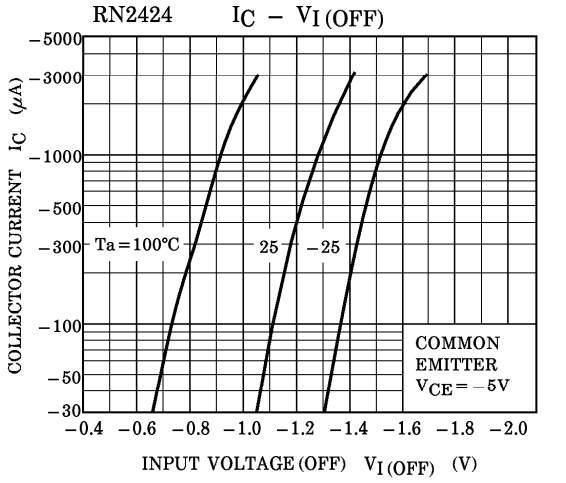
RN2424 $I_C - V_{I(ON)}$



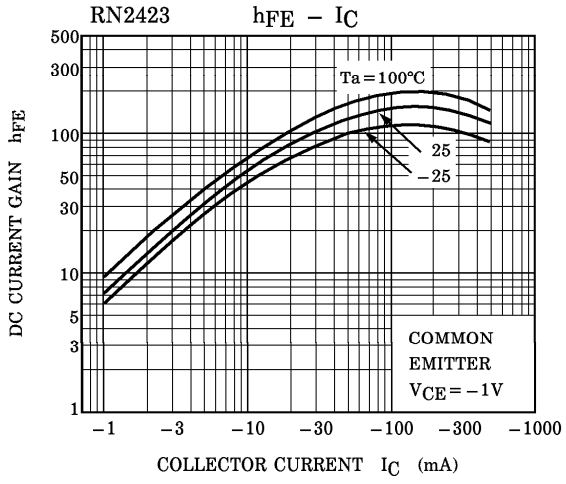
RN2423 $I_C - V_{I(OFF)}$



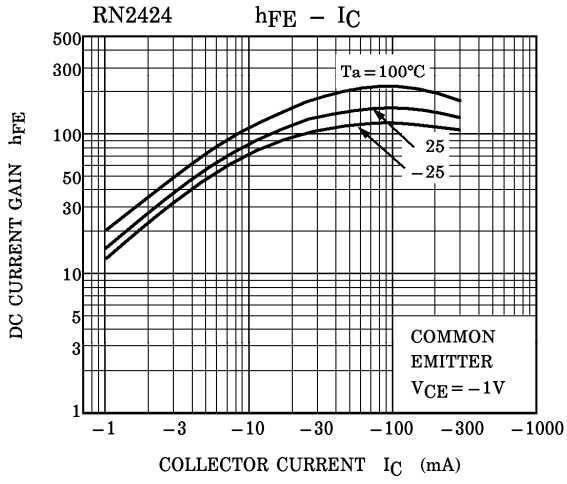
RN2424 $I_C - V_{I(OFF)}$



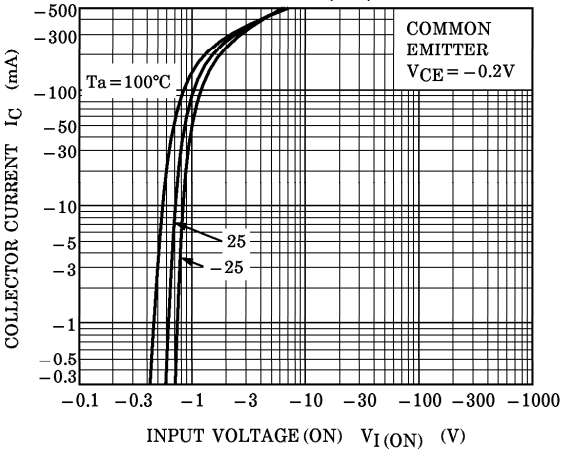
RN2423 $h_{FE} - I_C$



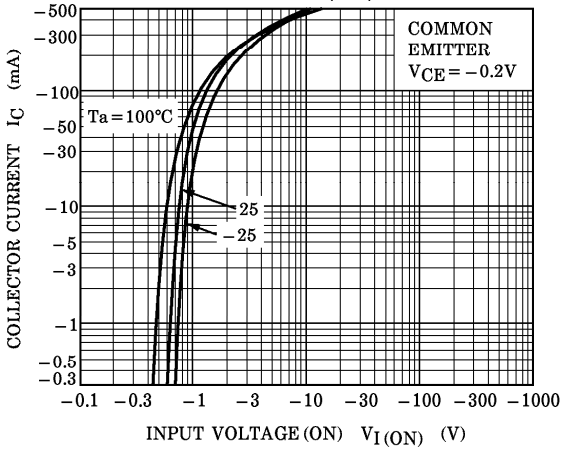
RN2424 $h_{FE} - I_C$



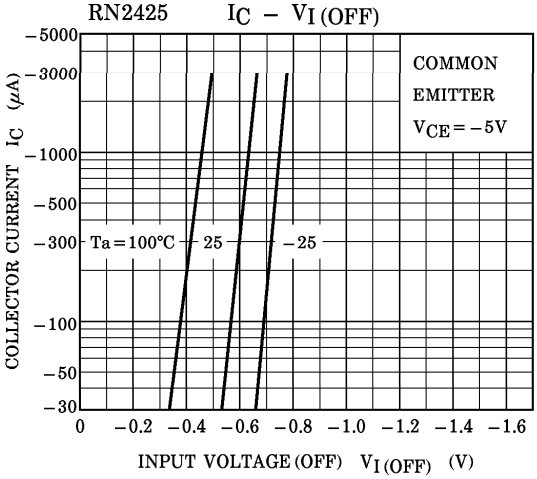
RN2425 $I_C - V_{I(ON)}$



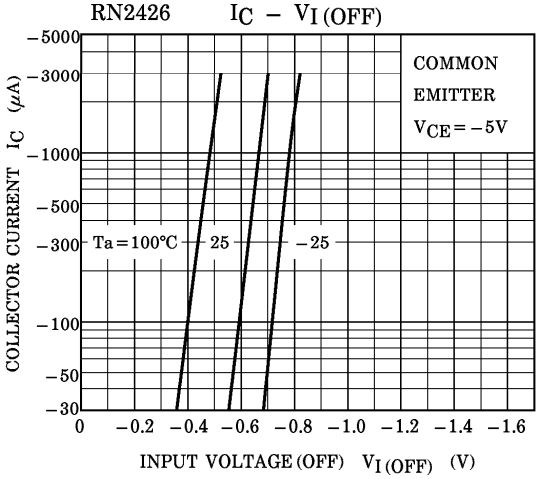
RN2426 $I_C - V_{I(ON)}$



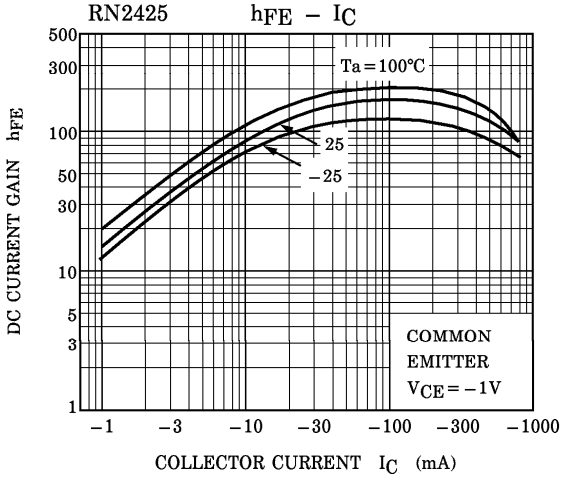
RN2425 $I_C - V_{I(OFF)}$



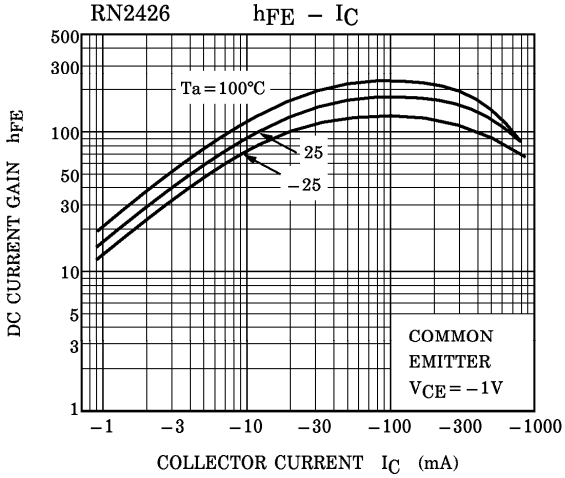
RN2426 $I_C - V_{I(OFF)}$



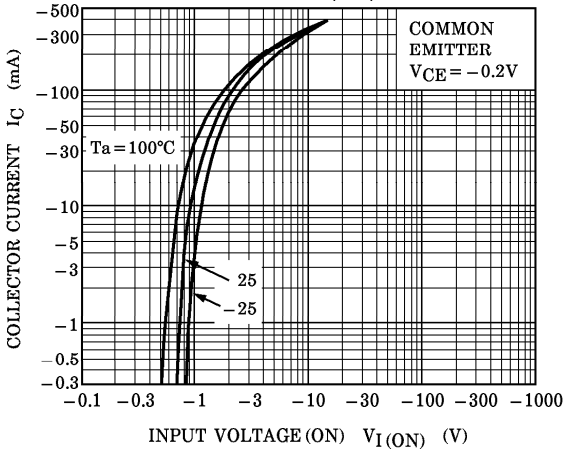
RN2425 $h_{FE} - I_C$



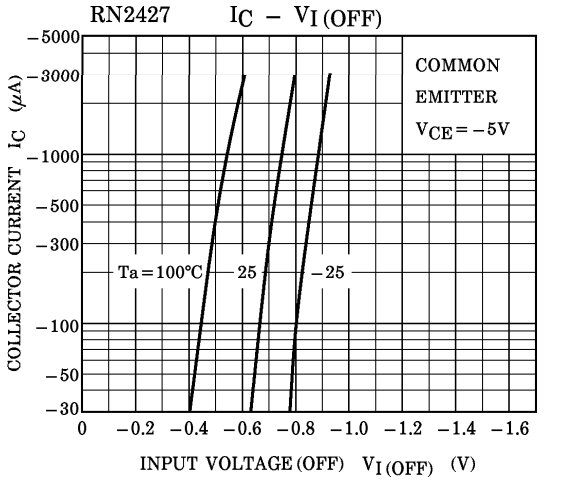
RN2426 $h_{FE} - I_C$



RN2427 $I_C - V_{I(ON)}$



RN2427 $I_C - V_{I(OFF)}$



RN2427 $h_{FE} - I_C$