

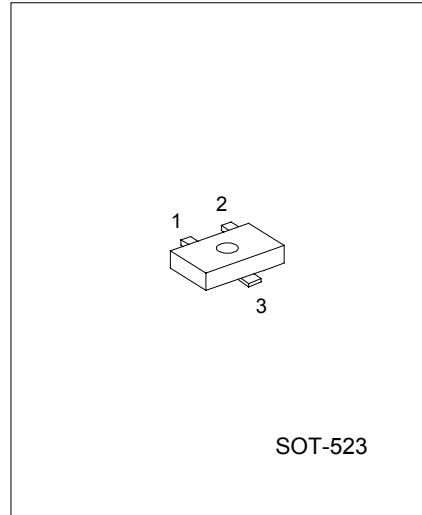
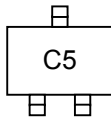
# UTC2SC4617 NPN EPITAXIAL SILICON TRANSISTOR

## GENERAL PURPOSE TRANSISTOR

### FEATURES

- \* Low Cob  
Cob=2.0pF (typ)
- \* Complements the UTC 2SA1774

### MARKING



SOT-523

1: EMITTER 2: BASE 3: COLLECTOR

### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter-Base Voltage	V <sub>EB0</sub>	7	V
Collector Current	I <sub>c</sub>	0.15	A
Collector Power Dissipation	P <sub>c</sub>	0.15	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

### ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>c</sub> = 50 μA	60			V
Collector Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>c</sub> = 1mA	50			V
Emitter-base Breakdown Voltage	BV <sub>EB0</sub>	I <sub>E</sub> =50 μA	7			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =60V			0.1	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> = 7V			0.1	μA
DC Current Transfer Ratio	h <sub>FE</sub>	V <sub>CE</sub> =6V, I <sub>c</sub> =1mA	120		560	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =50mA, I <sub>B</sub> =5mA			0.4	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =12V, I <sub>E</sub> = -2mA, f=100MHz		180		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CE</sub> = 12V, I <sub>E</sub> = 0A, f=1MHz		2	3.5	pF

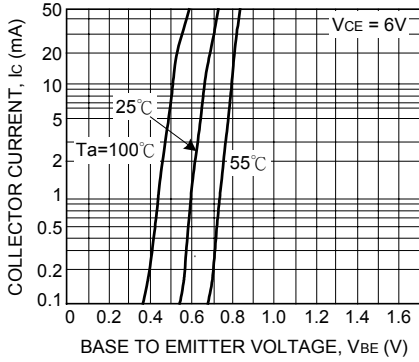
### CLASSIFICATION OF hFE

RANK	Q	R	S
RANGE	120 ~ 270	180 ~ 390	270 ~ 560

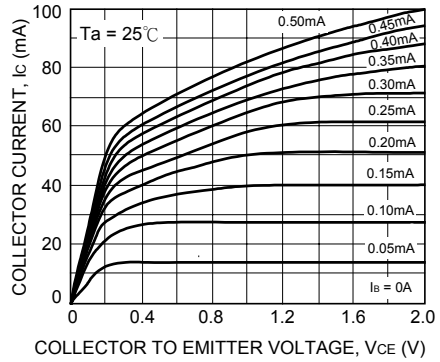
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## ELECTRICAL CHARACTERISTICS CURVES

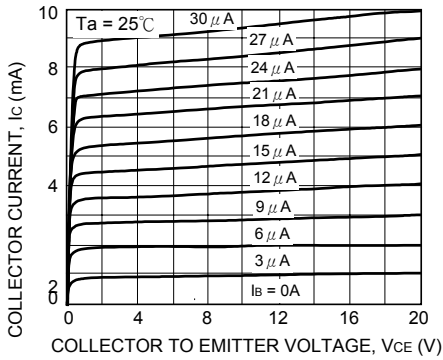
Grounded emitter propagation characteristics



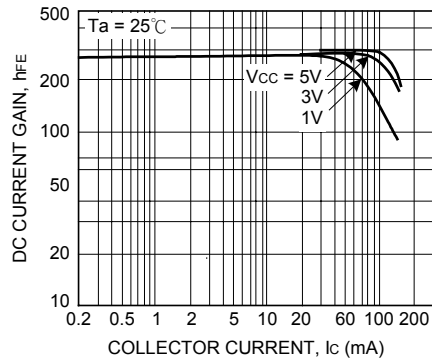
Grounded emitter output characteristics ( I )



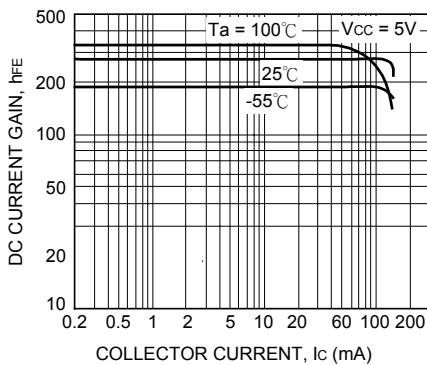
Grounded emitter output characteristics ( II )



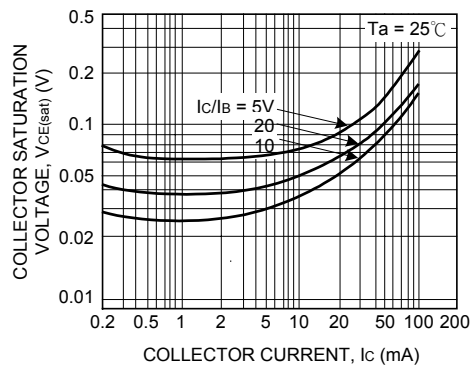
DC current gain vs. collector current ( I )



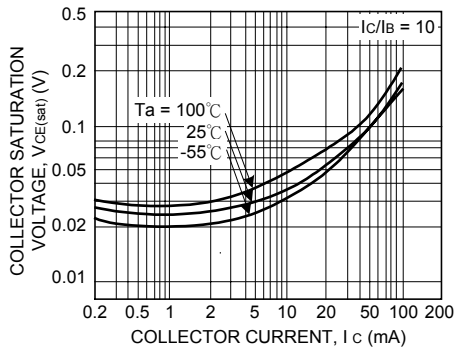
DC current gain vs. collector current ( II )



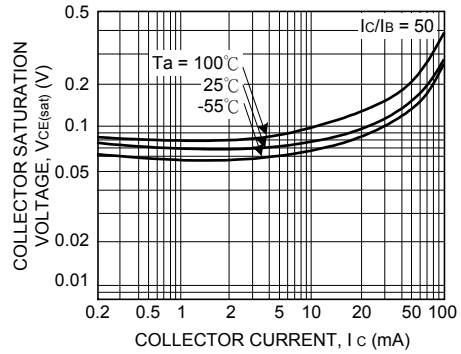
Collector-emitter saturation voltage vs. collector current



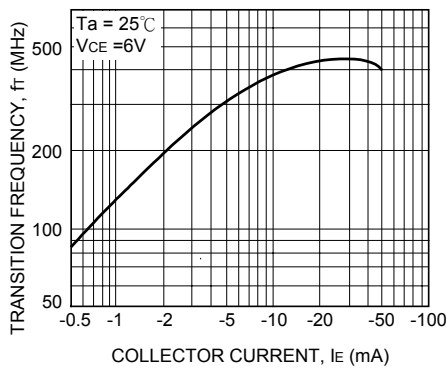
Collector-emitter saturation voltage vs. collector current ( I )



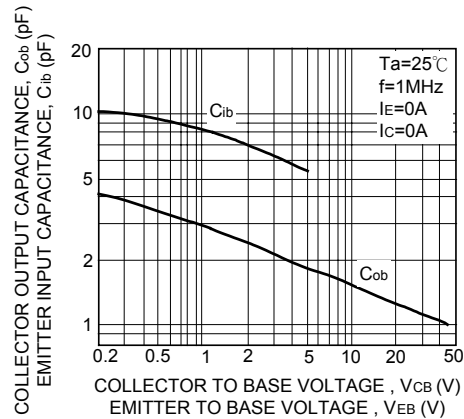
Collector-emitter saturation voltage vs. collector current ( II )



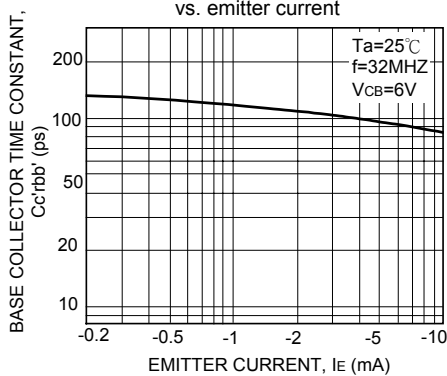
Gain bandwidth product vs. emitter current



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



Base-collector time constant vs. emitter current



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