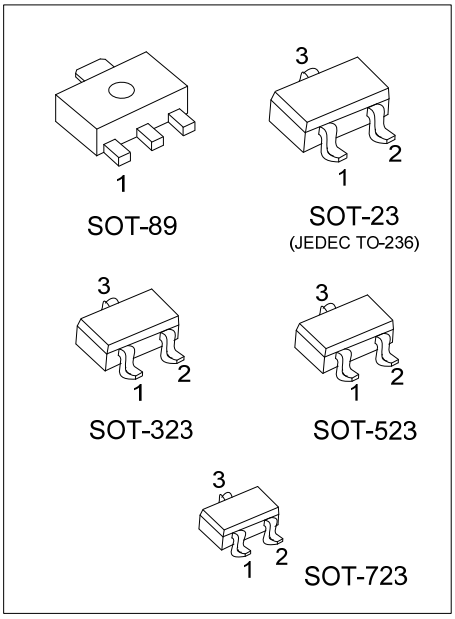
2SC4617

NPN SILICON TRANSISTOR

GENERAL PURPOSE TRANSISTOR



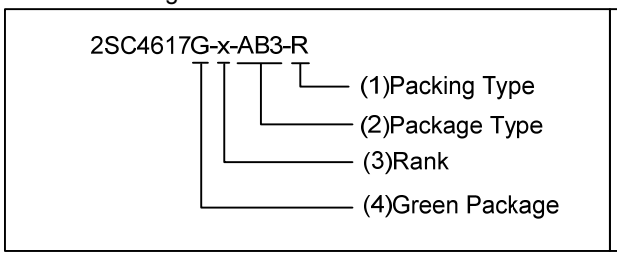
■ FEATURES

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

■ ORDERING INFORMATION

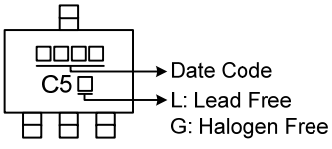
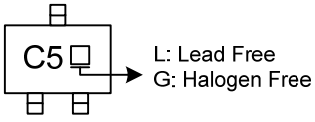
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4617L-x-AB3-R	2SC4617G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC4617L-x-AE3-R	2SC4617G-x-AE3-R	SOT-23	B	E	C	Tape Reel
2SC4617L-x-AL3-R	2SC4617G-x-AL3-R	SOT-323	B	E	C	Tape Reel
2SC4617L-x-AN3-R	2SC4617G-x-AN3-R	SOT-523	B	E	C	Tape Reel
2SC4617L-x-AQ3-R	2SC4617G-x-AQ3-R	SOT-723	B	E	C	Tape Reel

Note: Pin assignment: B: Base C: Collector E: Emitter



(1) R: Tape Reel
(2) AB3: SOT-89, AE3: SOT-23, AL3: SOT-323, AN3: SOT-523, AQ3: SOT-723
(3) Refer to CLASSIFICATION OF h_{FE}
(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-89	SOT-23 / SOT-323 / SOT-523 / SOT-723
	

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current		I_C	0.15	A
Collector Power Dissipation	SOT-89	P_C	500	mW
	SOT-523		150	mW
	SOT-23/SOT-323		200	mW
	SOT-723		125	mW
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

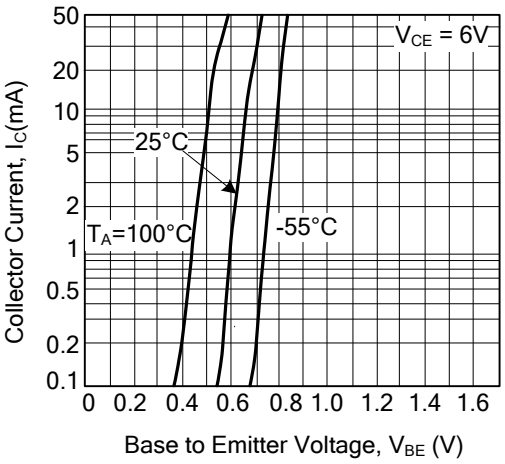
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	I_C= 50μA	60			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C= 1mA	50			V
Emitter-base Breakdown Voltage	BV_{EBO}	I_E=50μA	7			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}= 7V			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=6V, I_C=1mA	120		560	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=50mA, I_B=5mA			0.4	V
Transition Frequency	f_T	V_{CE}=12V, I_E= -2mA, f=100MHz		180		MHz
Output Capacitance	C_{ob}	V_{CE}= 12V, I_E= 0A, f=1MHz		2	3.5	pF

■ CLASSIFICATION OF h_{FE}

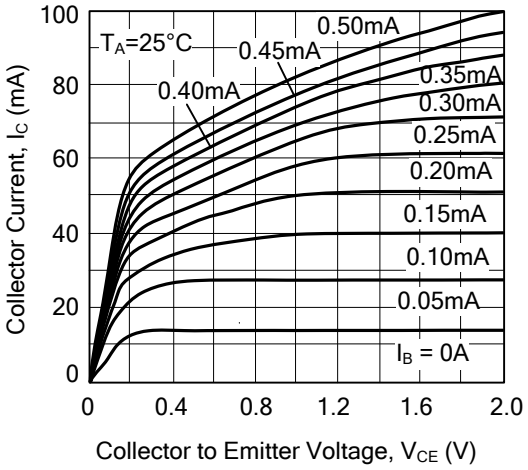
RANK	Q	R	S
RANGE	120 ~ 270	180 ~ 390	270 ~ 560

■ TYPICAL CHARACTERISTICS

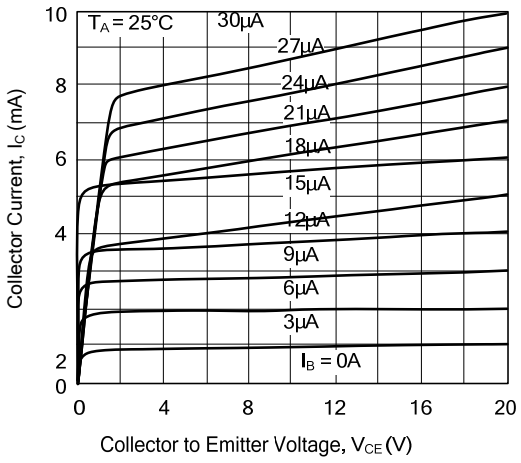
Grounded Emitter Propagation Characteristics



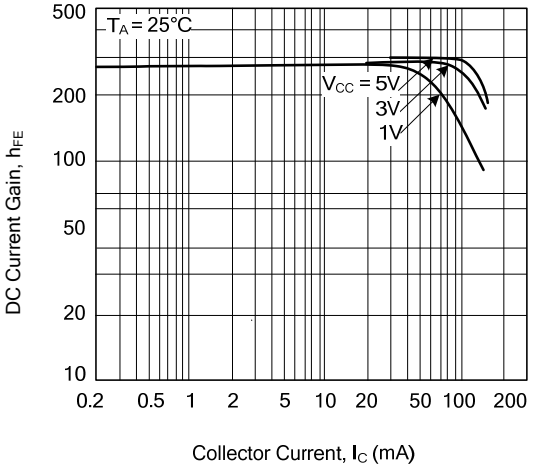
Grounded Emitter Output Characteristics (I)



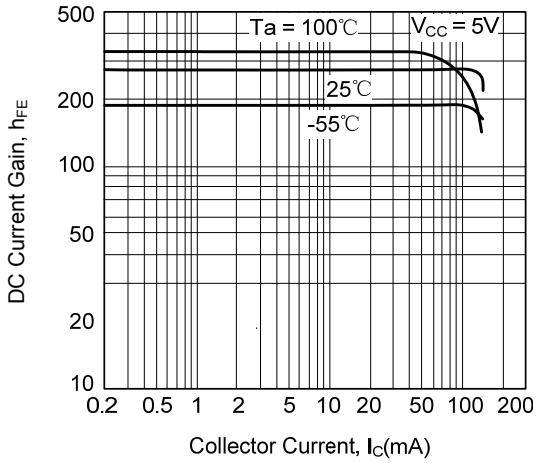
Grounded Emitter Output Characteristics (II)



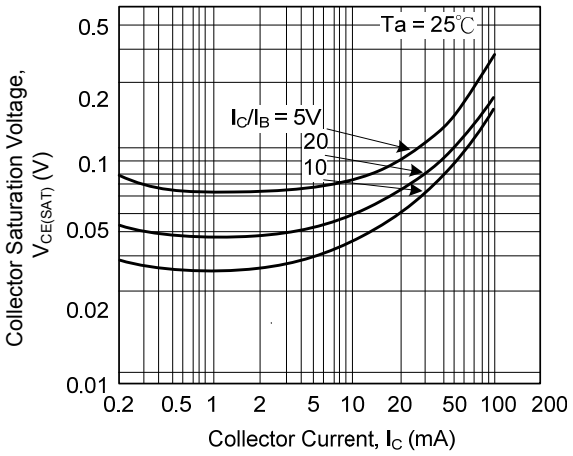
DC Current Gain vs. Collector Current (I)



DC Current Gain vs. Collector Current (II)

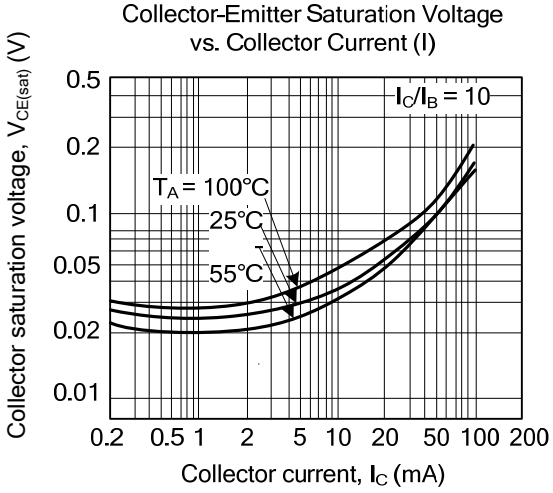


Collector-Emitter Saturation Voltage vs. Collector Current

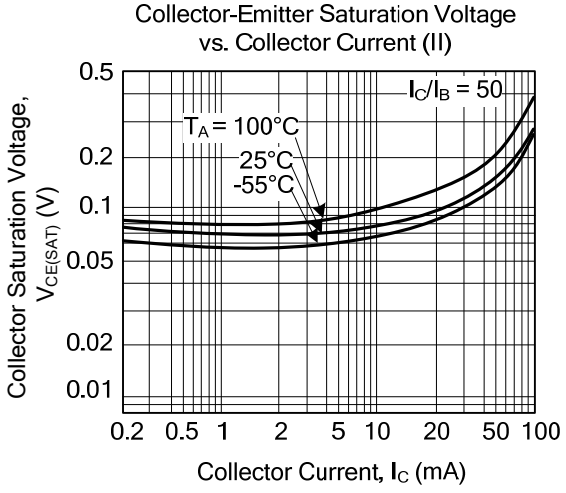


■ TYPICAL CHARACTERISTICS (Cont.)

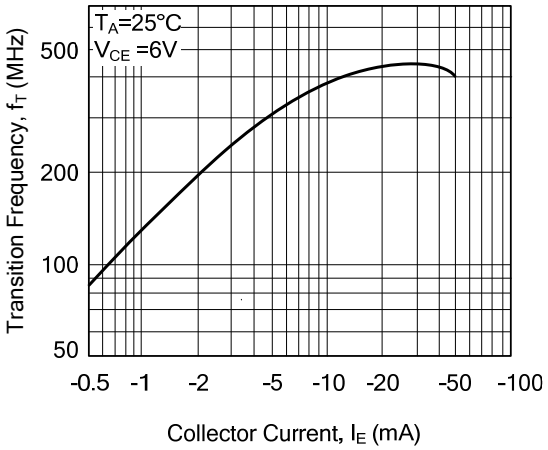
Collector-Emitter Saturation Voltage vs. Collector Current (I)



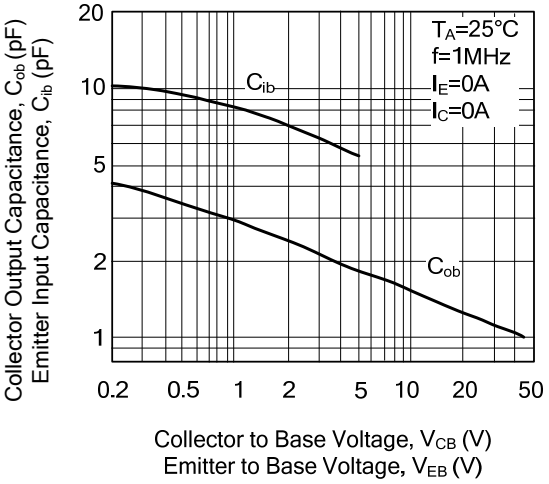
Collector-Emitter Saturation Voltage vs. Collector Current (II)



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