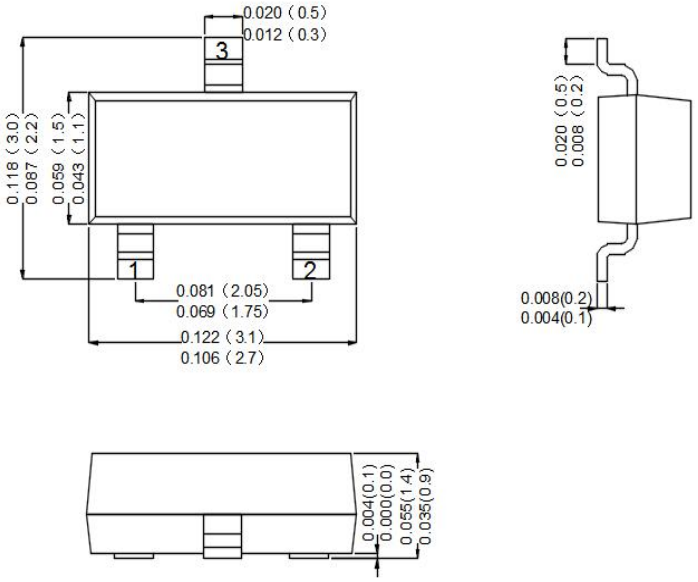
2SC2655

TRANSISTOR (NPN)

Features

- Low Saturation Voltage: V_{CE}(sat)=0.5V(Max)(I_C=1A)
- High Speed Switching Time: t_{stg}=1μs(Typ.)
- Complementary to 2SA1020

SOT-23



Dimensions in inches and (millimeters)

Mechanical Data

- Case:Molded Plastic,SOT-23
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable perMIL-STD-750,Method-2026.
- Marking: 2655
- Mounting Position : Any.
- Equivalent Circuit:

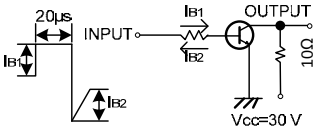
Maximum Ratings Maximum Ratings (Rating at 25℃ ambient temperature unless otherwise specified.)

PARAMETER	SYMBOL	Value	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Collector Current (Pulse) (Note 1)	I_{CP}	3	A
Base Current	I_B	0.5	A
Collector Power Dissipation	Pc	350	mW
Junction Temperature	T_J	150	◦C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: 1. $P_W \leqq 16$ms, Duty Cycle $\leqq 50\%$.

2. Absolute ximum 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 (Rating at 25℃ ambient temperature unless otherwise specified.)

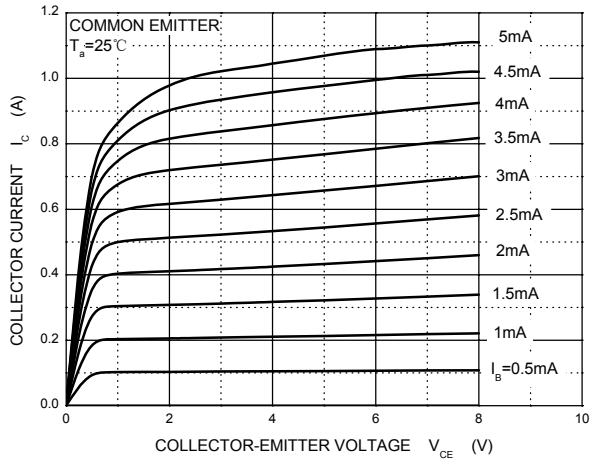
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C= 10mA, I_B= 0	50			V
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E= 0			1.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}= 5V, I_C=0			1.0	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=2V, I_C=0.5A	70		240	
	$h_{FE(2)}$	V_{CE}=2V, I_C=1.5A	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=1A, I_B=0.05A			0.5	V
Base- Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=1A, I_B=0.05A			1.2	V
Transition Frequency	f_T	V_{CE}=2V, I_C=0.5A		100		MHz
Collector Output Capacitance	C_{OB}	V_{CB}= 10V, I_E= 0, f=1MHz		30		pF
Switching Time(Turn-on Time)	t_{ON}	 I_{B1}= -I_{B2}=0.05A DUTY CYCLE≦1%		0.1		μS

CLASSIFICATION OF $h_{FE(1)}$

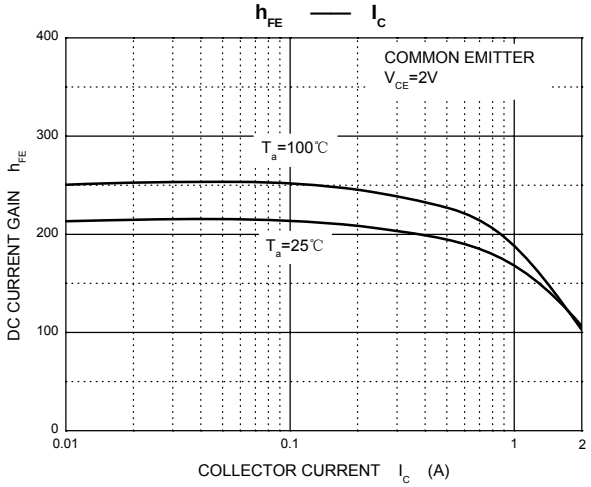
RANK	O	Y
RANGE	70-140	120-240

Rating And Characteristic Curves

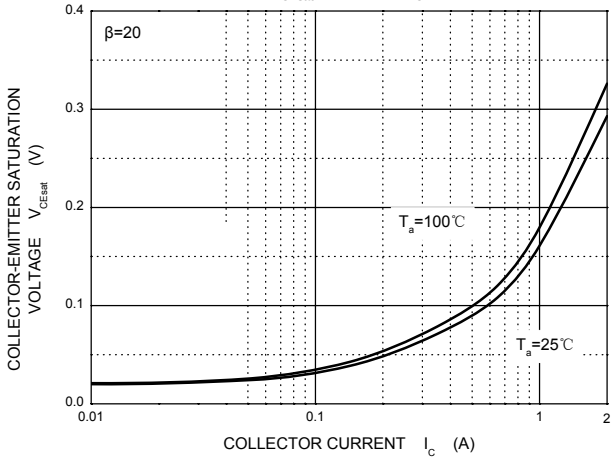
Static Characteristic



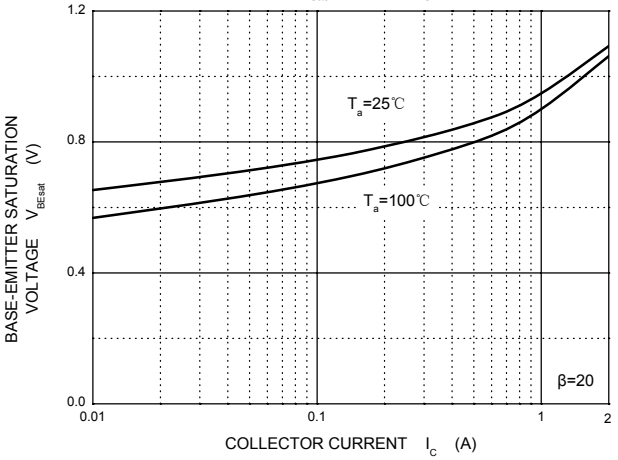
h_{FE} —— I_C



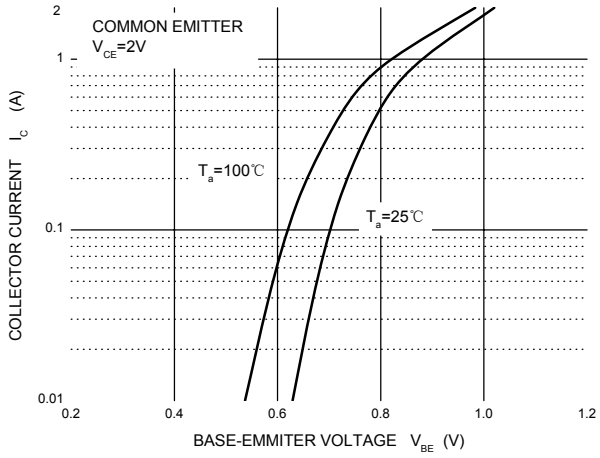
V_{CEsat} —— I_C



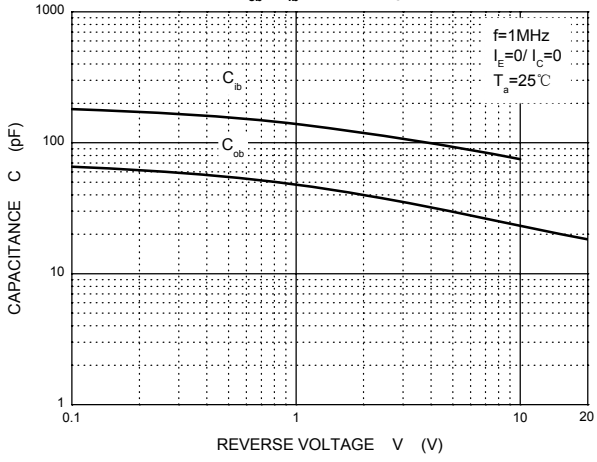
V_{BEsat} —— I_C



I_C —— V_{BE}



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}



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