

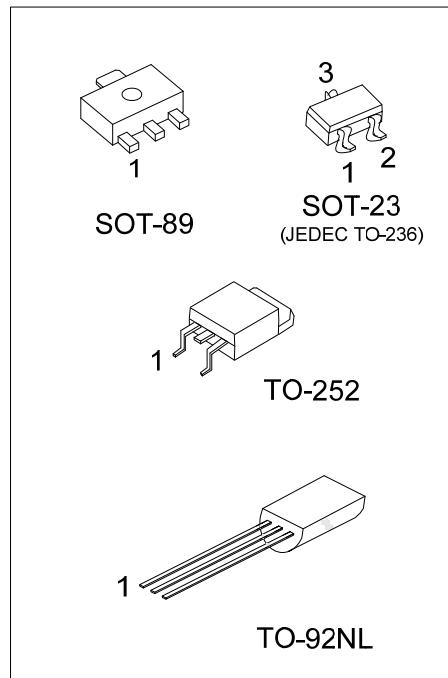
2SC2655

NPN SILICON TRANSISTOR

**POWER AMPLIFIER
APPLICATIONS POWER
SWITCHING APPLICATIONS**

■ FEATURES

- * Low saturation voltage: $V_{CE(SAT)} = 0.5V$ (Max.)
- * High speed switching time: $T_{STG} = 1.0\mu s$ (Typ.)

**■ ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC2655L-x-AB3-R	2SC2655G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC2655L-x-AE3-R	2SC2655G-x-AE3-R	SOT-23	B	E	C	Tape Reel
2SC2655L-x-TN3-R	2SC2655G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SC2655L-x-T9N-B	2SC2655G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SC2655L-x-T9N-K	2SC2655G-x-T9N-K	TO-92NL	E	C	B	Bulk

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

	(1) B: Tape Box, K: Bulk, R: Tape Reel	
	(2) AB3: SOT-89, AE3: SOT-23, T9N: TO-92NL	
	TN3: TO-252	
	(3) refer to Classification of h_{FE1}	
	(4) G: Halogen Free and Lead Free, L: Lead Free	

■ MARKING

SOT-23	SOT-89
TO-252	TO-92NL

■ ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATING	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 2)	I_{CP}	3	A
Base Current	I_B	0.5	A
Collector Power Dissipation	SOT-23	350	mW
	SOT-89	500	mW
	TO-252	1000	mW
	TO-92NL	900	mW
Junction Temperature	T_J	+150	$^\circ\text{C}$
Operating Temperature	T_{OPR}	-40 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Notes: 1. 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.

2. $P_w \leq 16\text{ms}$, Duty Cycle $\leq 50\%$.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	417	$^\circ\text{C/W}$
	SOT-89	250	
	TO-252	75	
	TO-92NL	125	
Junction to Case	SOT-23	208.3	$^\circ\text{C/W}$
	SOT-89	156.3	
	TO-252	12.5	
	TO-92NL	83.3	

Note: Device mounted on FR-4 substrate P_c board, 2oz copper, with 1inch square copper plate.

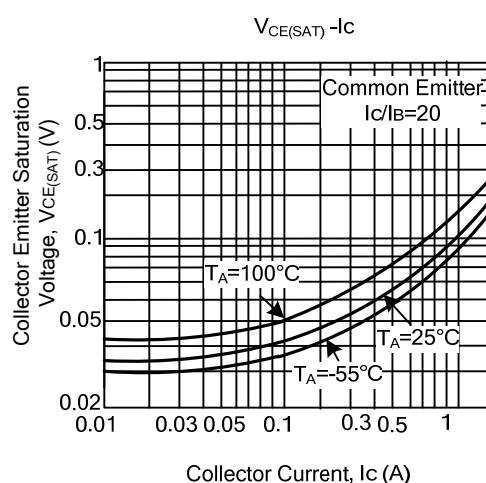
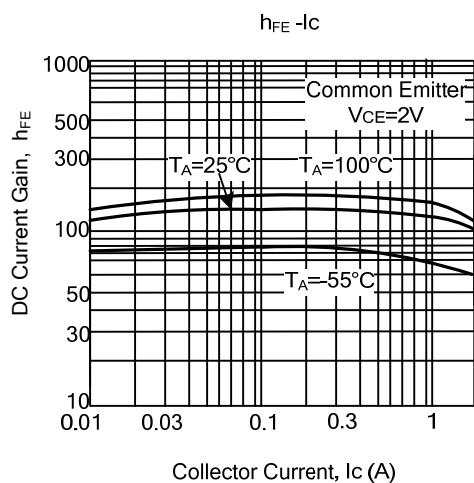
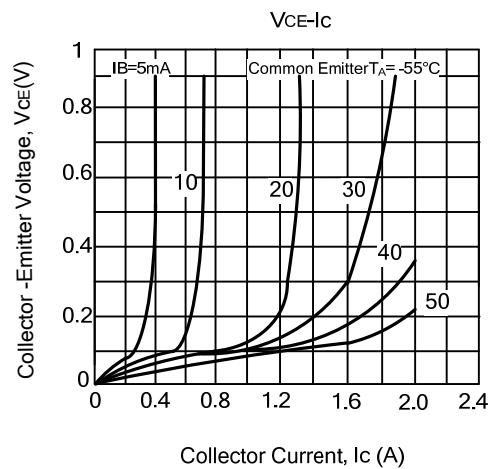
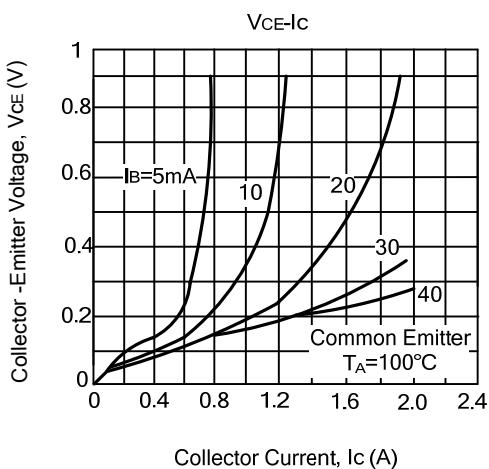
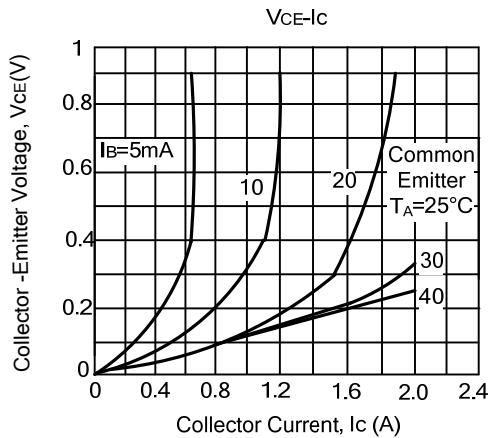
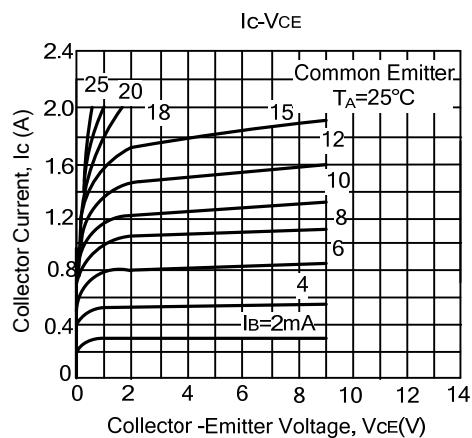
■ ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	$I_C = 10\mu\text{A}, I_E = 0$	50			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10\text{mA}, I_B = 0$	50			V
Emitter to Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$			1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			1.0	μA
DC Current Gain	h_{FE1}	$V_{CE} = 2\text{V}, I_C = 0.5\text{A}$	70		240	
	h_{FE2}	$V_{CE} = 2\text{V}, I_C = 1.5\text{A}$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 1\text{A}, I_B = 0.05\text{A}$			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 1\text{A}, I_B = 0.05\text{A}$			1.2	V
Transition Frequency	f_T	$V_{CE} = 2\text{V}, I_C = 0.5\text{A}$		100		MHz
Collector Output Capacitance	C_{OB}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		30		pF
Switching Time(Turn-on Time)	t_{ON}	 $I_{B1} = -I_{B2} = 0.05\text{A}$ DUTY CYCLE $\leq 1\%$		0.1		μs

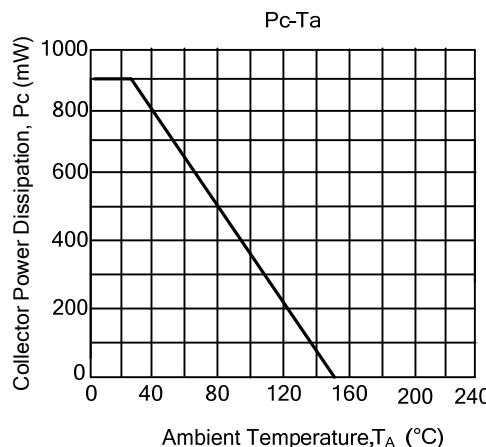
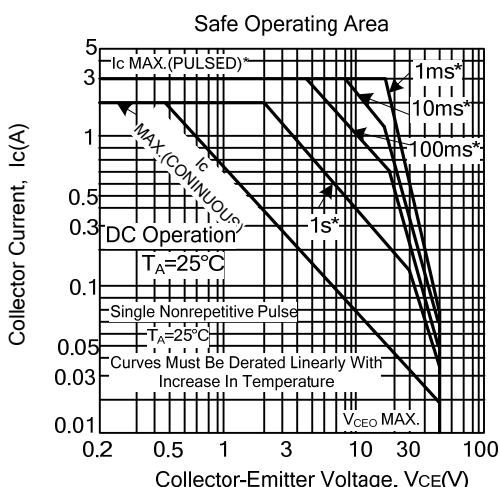
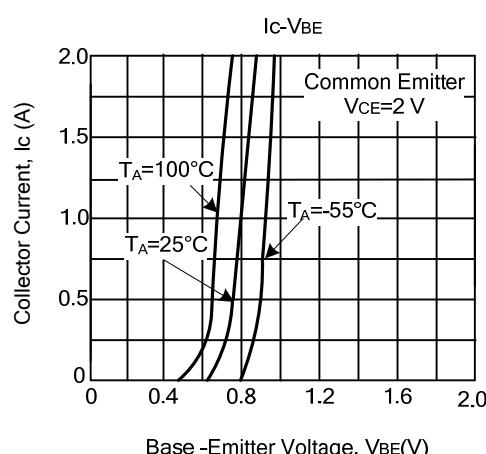
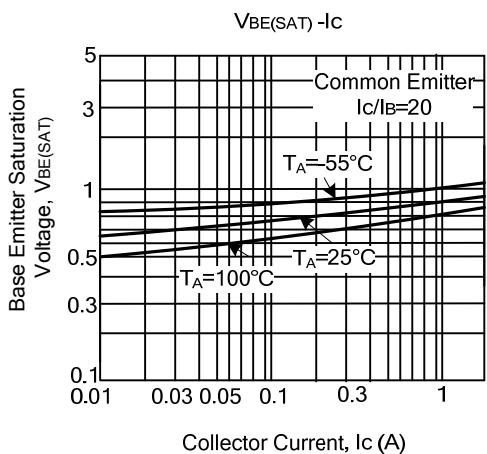
■ CLASSIFICATION OF h_{FE1}

RANK	O	Y
RANGE	70-140	120-240

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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