



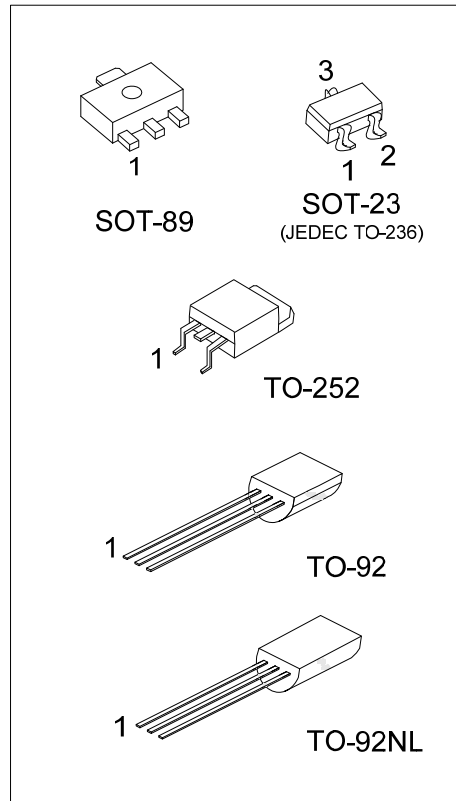
2SC2655

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.)



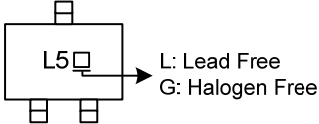
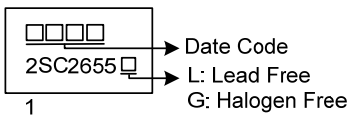
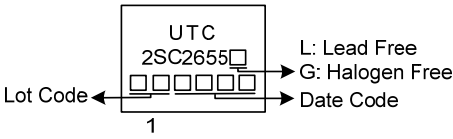
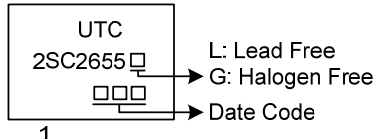
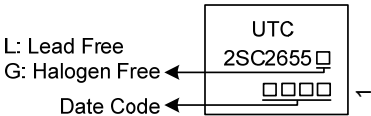
■ ORDERING INFORMATION

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-T92-B	2SC2655G-x-T92-B	TO-92	E	C	B	Tape Box
2SC2655L-x-T92-K	2SC2655G-x-T92-K	TO-92	E	C	B	Bulk
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

<p>2SC2655G-x-AB3-R</p>	<p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, AE3: SOT-23, T92: TO-92 T9N: TO-92NL, TN3: TO-252 (3) refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

SOT-23	SOT-89
 <p>L: Lead Free G: Halogen Free</p>	 <p>Date Code L: Lead Free G: Halogen Free</p>
TO-252	TO-92
 <p>L: Lead Free G: Halogen Free Date Code Lot Code</p>	 <p>L: Lead Free G: Halogen Free Date Code</p>
TO-92NL	-
 <p>L: Lead Free G: Halogen Free Date Code</p>	-

■ 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	P_C	350	mW
	SOT-89		1000	mW
	TO-252		1500	mW
	TO-92/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.

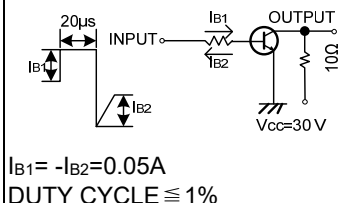
2. $P_w \leq 16\text{ms}$, Duty Cycle $\leq 50\%$.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	θ_{JA}	417	$^\circ\text{C/W}$
	SOT-89		125	$^\circ\text{C/W}$
	TO-252		83.33	$^\circ\text{C/W}$
	TO-92/TO-92NL		138.8	$^\circ\text{C/W}$
Junction to Case	SOT-23	θ_{JC}	208.3	$^\circ\text{C/W}$
	SOT-89		62.5	$^\circ\text{C/W}$
	TO-252		12.5	$^\circ\text{C/W}$
	TO-92/TO-92NL		83.33	$^\circ\text{C/W}$

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

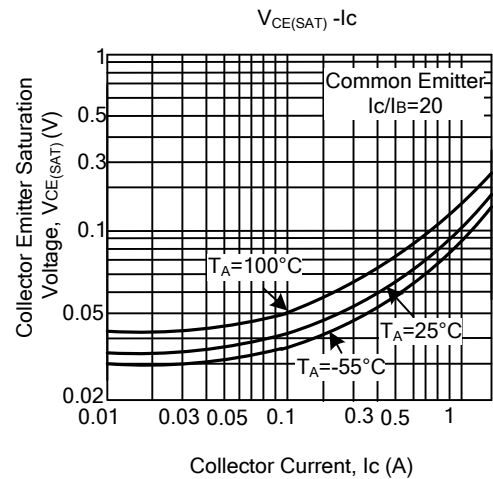
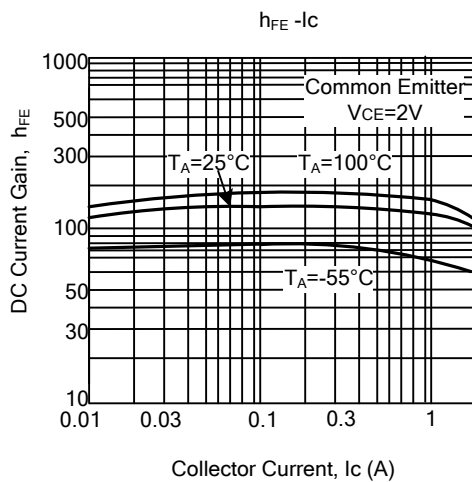
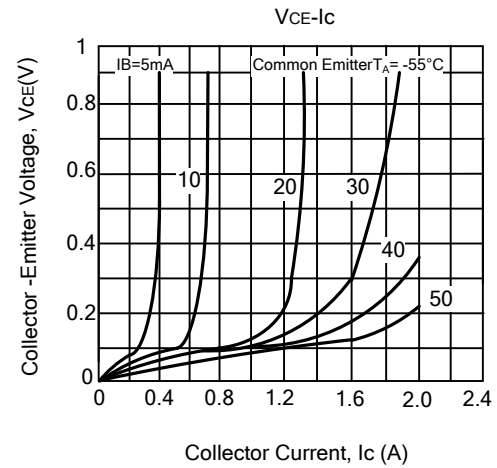
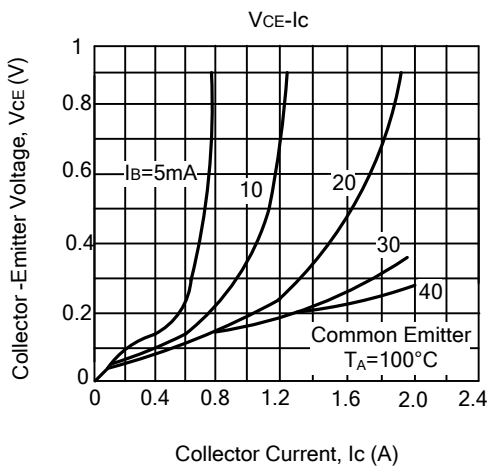
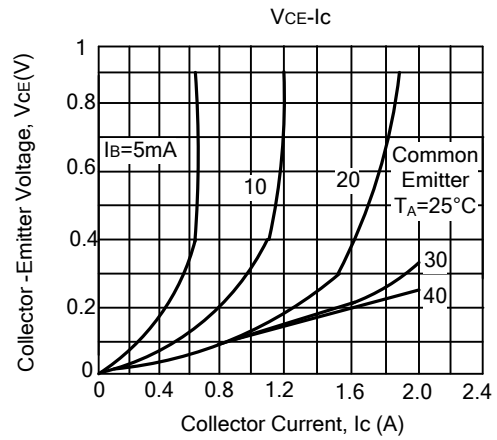
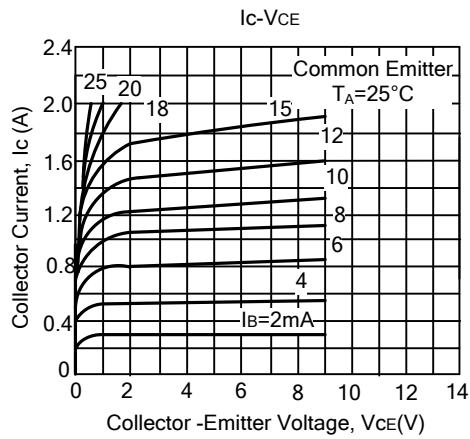
■ ELECTRICAL CHARACTERISTICS (T_A= 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV _{CBO}	I _C = 10μA, I _E = 0	50			V
Collector to Emitter Breakdown Voltage	BV _{CEO}	I _C = 10mA, I _B = 0	50			V
Emitter to Base Breakdown Voltage	BV _{EBO}	I _E = 10μA, I _C = 0	5			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 _{FE1}	V _{CE} =2V, I _C =0.5A	70		240	
	h _{FE2}	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}	 <p>I_{B1}= -I_{B2}=0.05A DUTY CYCLE ≤ 1%</p>		0.1		μS

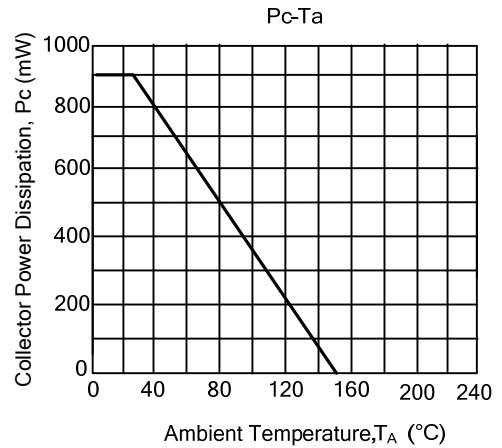
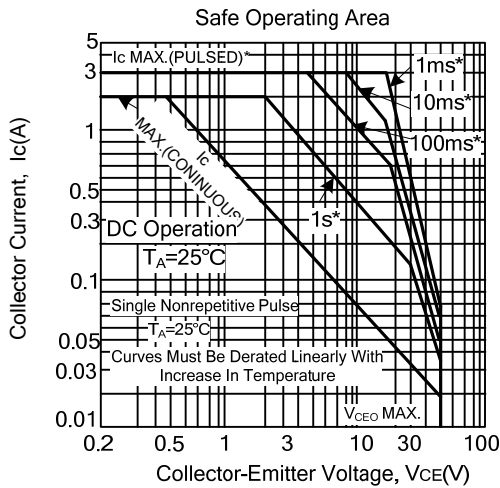
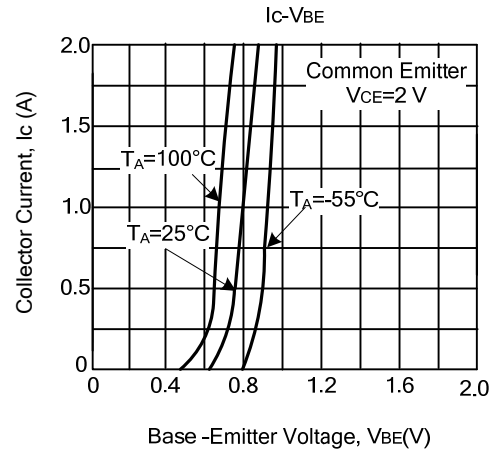
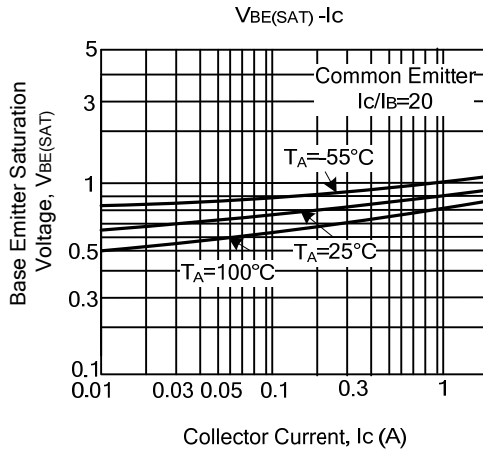
■ CLASSIFICATION OF h_{FE1}

RANK	O	Y
RANGE	70-140	120-240

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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