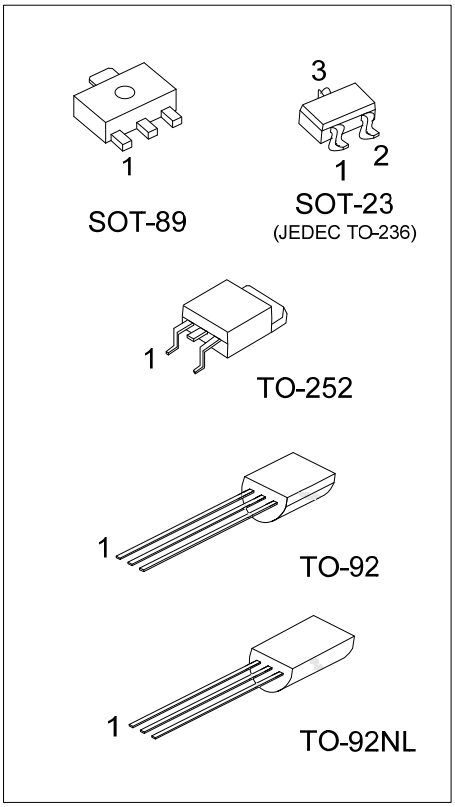
2SC2655

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}=1.0μs (Typ.)

■ ORDERING INFORMATION

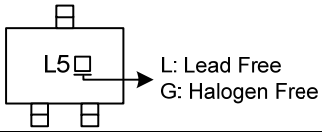
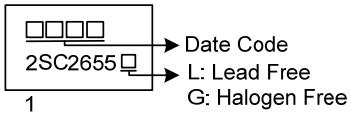
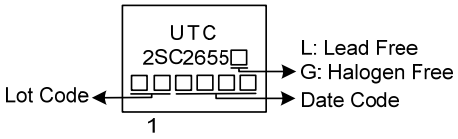
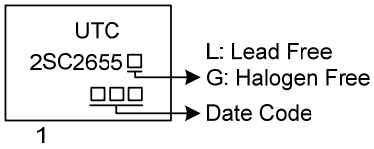
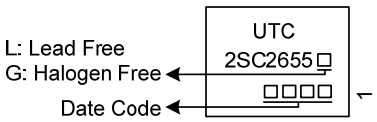
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC2655L-x-AB3-R	2SC2655G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC2655L-x-AE3-R	2SC2655G-x-AE3-R	SOT-23	B	E	C	Tape Reel
2SC2655L-x-TN3-R	2SC2655G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SC2655L-x-T92-B	2SC2655G-x-T92-B	TO-92	E	C	B	Tape 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

2SC2655G-x-AB3-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(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

■ MARKING

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

■ ABSOLUTE MAXIMUM RATINGS (T_A= 25°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		500	mW
	TO-252		1000	mW
	TO-92 TO-92NL		900	mW
Junction Temperature		T_J	+150	°C
Operating Temperature		T_{OPR}	-40 ~ +150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

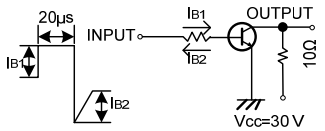
Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. $P_W \leqq 16$ms, Duty Cycle $\leqq 50\%$.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-23	θ_{JA}	417	°C/W
	SOT-89		250	
	TO-252		75	
	TO-92 TO-92NL		125	
Junction to Case	SOT-23	θ_{JC}	208.3	°C/W
	SOT-89		156.3	
	TO-252		12.5	
	TO-92 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°C, unless otherwise specified)

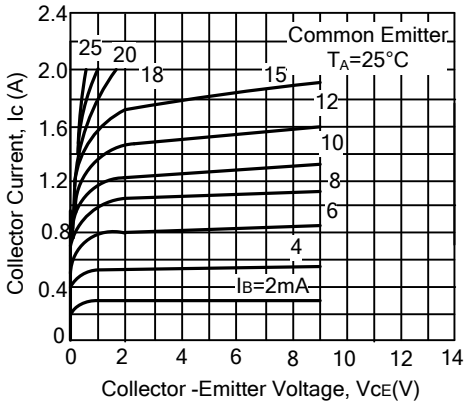
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	I_C= 10μA, I_E= 0	50			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	I_C= 10mA, I_B= 0	50			V
Emitter to Base Breakdown Voltage	BV_{EBO}	I_E= 10μA, I_C= 0	5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, 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}	 I_{B1}= -I_{B2}=0.05A DUTY CYCLE≦1%		0.1		μS

■ CLASSIFICATION OF h_{FE1}

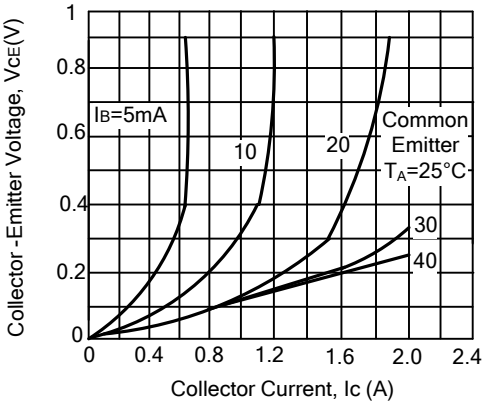
RANK	O	Y
RANGE	70-140	120-240

■ TYPICAL CHARACTERISTICS

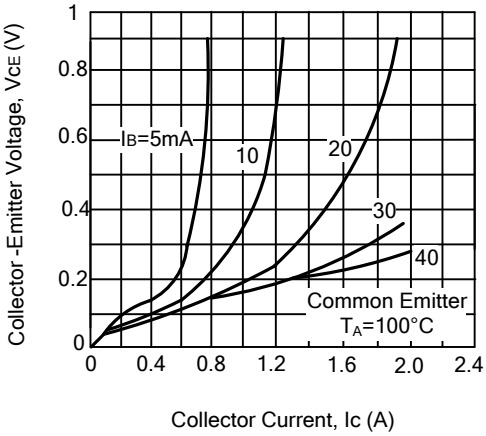
Ic-VCE



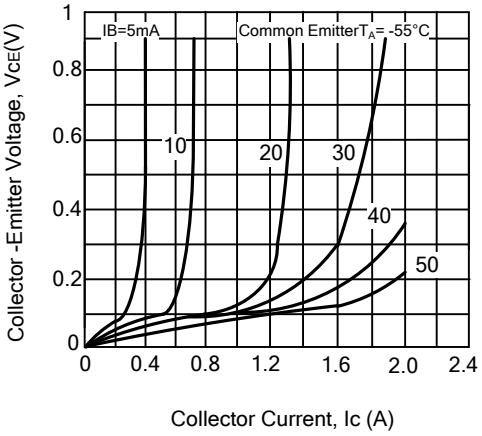
VCE-Ic



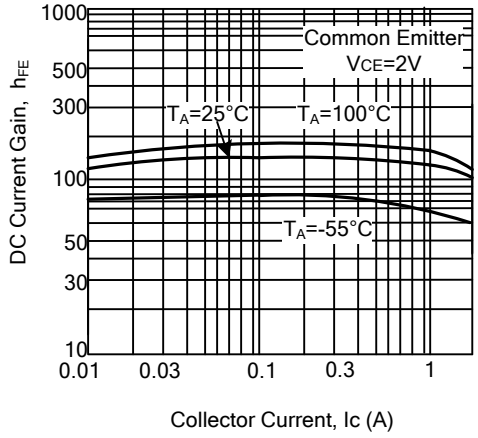
VCE-Ic



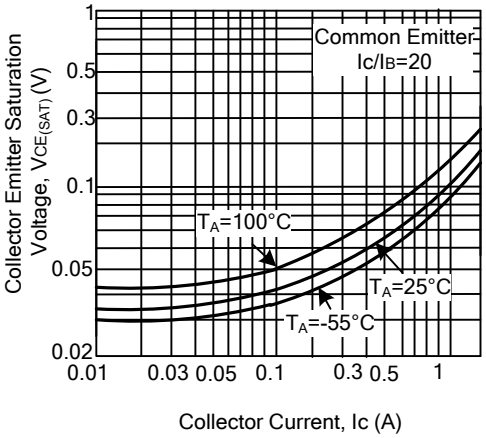
VCE-Ic



hFE -Ic

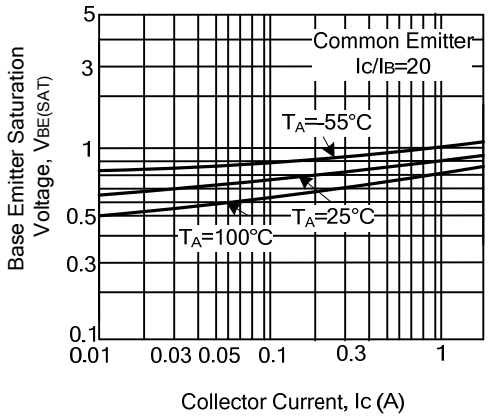


VCE(SAT) -Ic

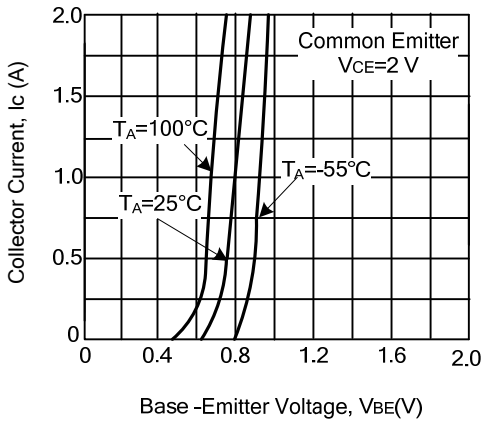


■ TYPICAL CHARACTERISTICS (Cont.)

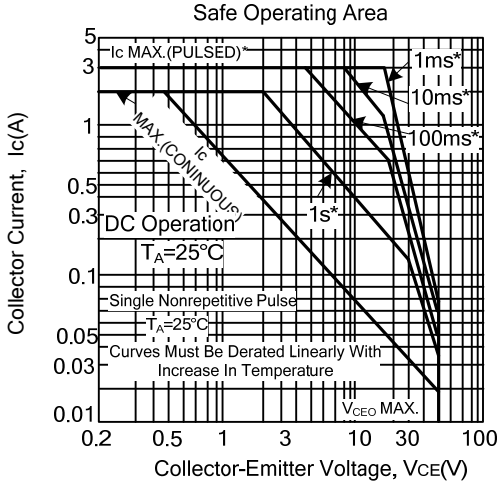
$V_{BE(SAT)}$ -Ic



Ic-V_{BE}



Safe Operating Area



Pc-Ta