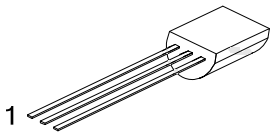
2SC1815

NPN SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC NPN TRANSISTOR

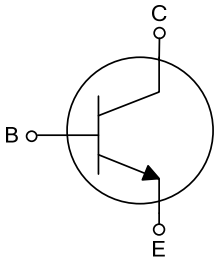


TO-92

■ FEATURES

* Collector-Emitter voltage:
  BV_{CEO}=50V
* Collector current up to 150mA
* High h_{FE} linearity
* Complimentary to UTC 2SA1015

■ SYMBOL



■ ORDERING INFORMATION

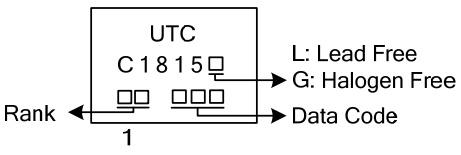
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC1815L-xx-T92-B	2SC1815G-xx-T92-B	TO-92	E	C	B	Tape Box
2SC1815L-xx-T92-K	2SC1815G-xx-T92-K	TO-92	E	C	B	Bulk

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

2SC1815L-xx-T92-B

(1) Packing Type	(1) B: Tape Box, K: Bulk
(2) Package Type	(2) T92: TO-92
(3) Rank	(3) xx: Refer to Classification of h_{FE1}
(4) Green Package	(4) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (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}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	50	mA
Power Dissipation (T_A=25°C)	P_D	625	mW
Junction Temperature	T_J	+125	°C
Storage Temperature	T_{STG}	-55 ~ +125	°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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	80	°C/W

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=60V, I_E=0			100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		0.1	0.25	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=100mA, I_B=10mA			1.0	V
DC Current Gain	h_{FE1}	V_{CE}=6V, I_C=2mA	70		700	
	h_{FE2}	V_{CE}=6V, I_C=150mA	25			
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=50mA	80			MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		2.0	3.0	pF

■ CLASSIFICATION OF h_{FE1}

RANK	O	Y	GR	BL
RANGE	70~140	120~240	200~400	350~700

■ TYPICAL CHARACTERISTICS

Fig.1 Static characteristics

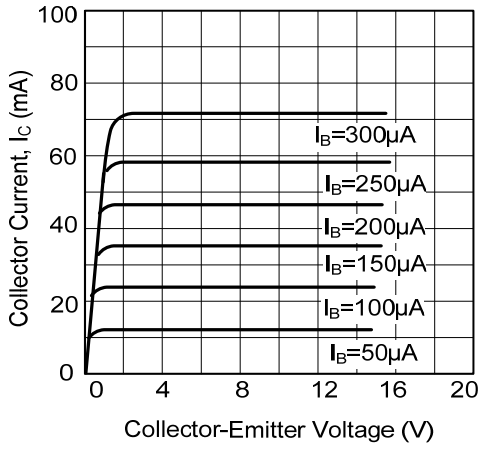


Fig.2 DC current Gain

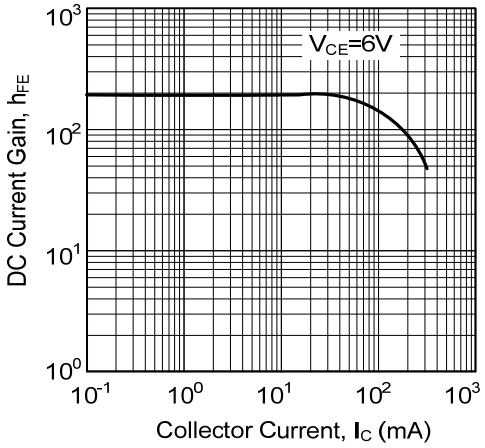


Fig.3 Base-Emitter on Voltage

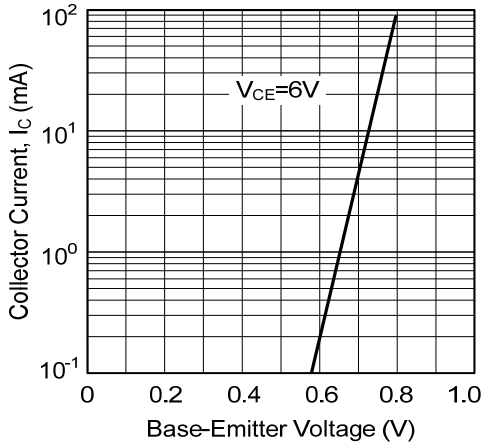


Fig.4 Saturation Voltage

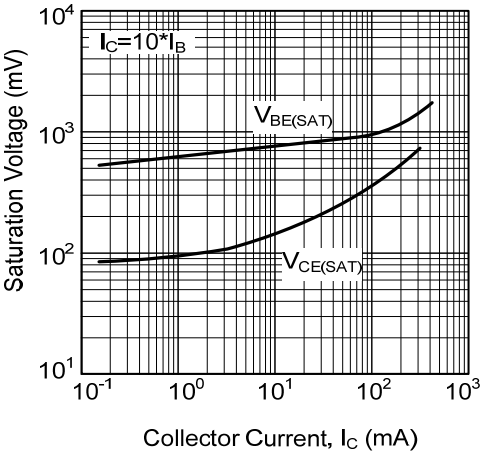


Fig.5 Current Gain-Bandwidth Product

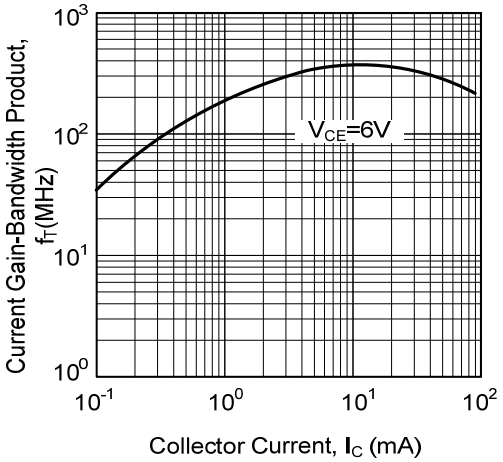
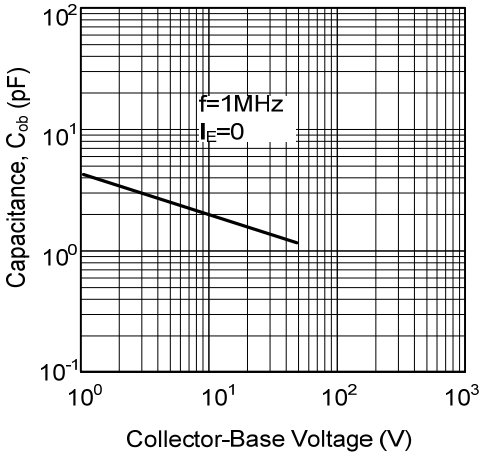
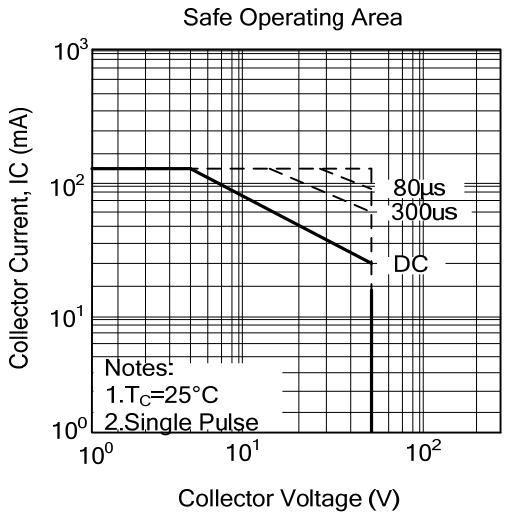


Fig.6 Collector Output Capacitance



■ TYPICAL CHARACTERISTICS(Cont.)



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