



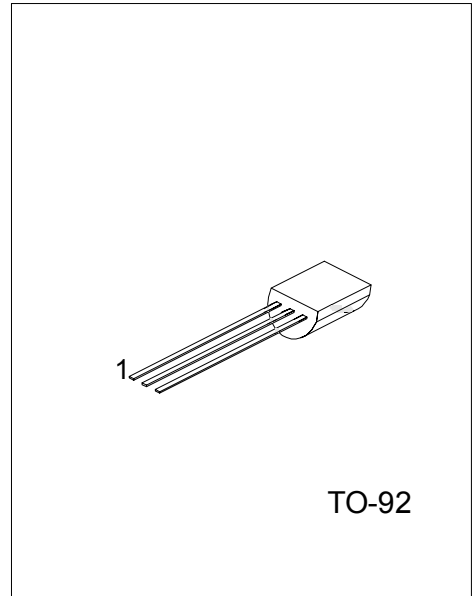
2SC1815

NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC NPN TRANSISTOR

FEATURES

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



*Pb-free plating product number: 2SC1815L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SC1815-x-T92-A-B	2SC1815L-x-T92-A-B	TO-92	E	C	B	Tape Box
2SC1815-x-T92-A-K	2SC1815L-x-T92-A-K	TO-92	E	C	B	Bulk

<p>2SC1815L-x-T92-A-B</p>	<p>(1) Packing Type (2) Pin Assignment (3) Package Type (4) Rank (5) Lead Plating</p>	<p>(1) B: Tape Box, K: Bulk (2) refer to Pin Assignment (3) T92: TO-92 (4) x: refer to Classification of h_{FE1} (5) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ **ABSOLUTE MAXIMUM RATING** (Ta=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
Collector dissipation(Ta=25°C)	P_C	400	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.

■ **ELECTRICAL CHARACTERISTICS** (Ta=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(note)	h_{FE1}	$V_{CE}=6V, I_C=2mA$	120		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
Noise Figure	NF	$I_C=-0.1mA, V_{CE}=6V$ $R_G=10k\Omega, f=100Hz$		1.0	1.0	dB

■ **CLASSIFICATION OF h_{FE1}**

RANK	Y	GR	BL
RANGE	120-240	200-400	350-700

■ TYPICAL CHARACTERISTICS

Fig.1 Static characteristics

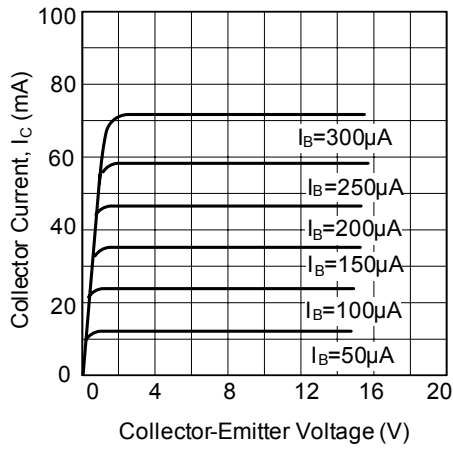


Fig.2 DC current Gain

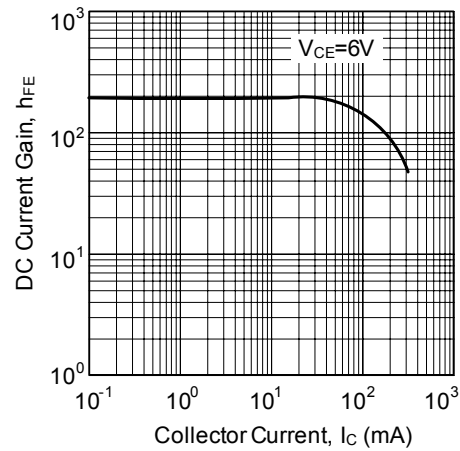


Fig.3 Base-Emitter on Voltage

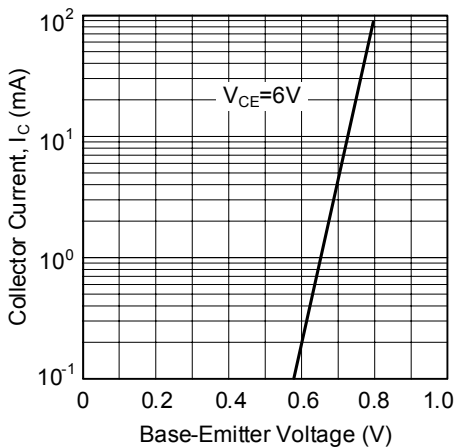


Fig.4 Saturation Voltage

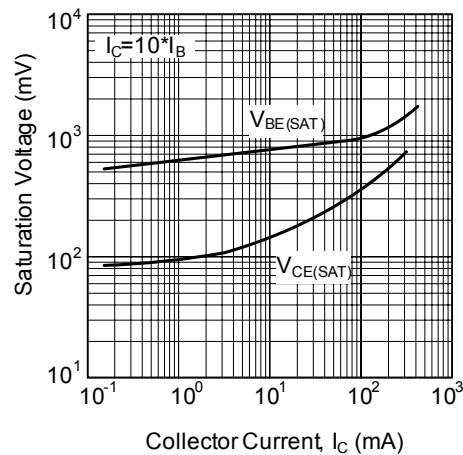


Fig.5 Current Gain-Bandwidth Product

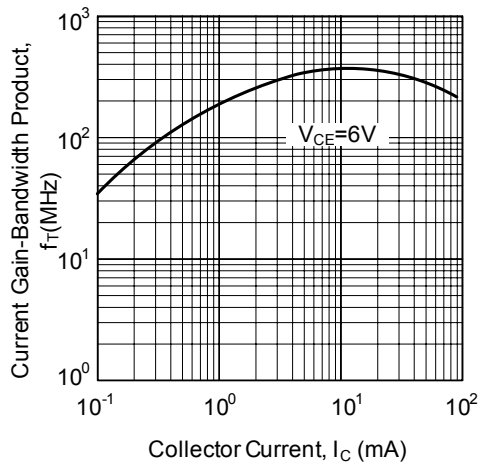
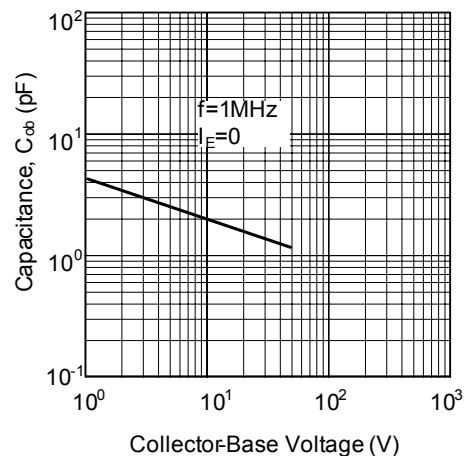


Fig.6 Collector Output Capacitance



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