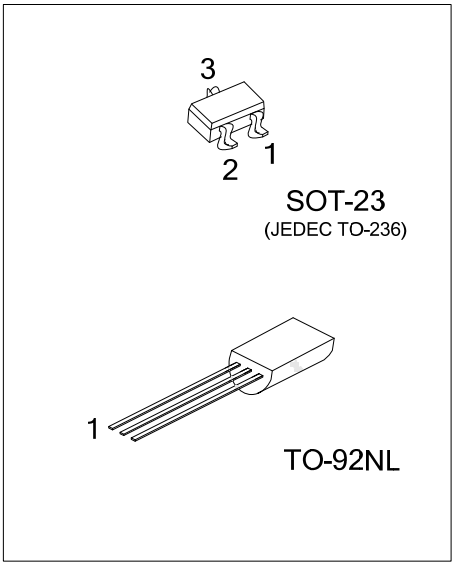
2SD667

NPN SILICON TRANSISTOR

SILICON NPN EPITAXIAL



■ DESCRIPTION

The UTC **2SD667** is a NPN epitaxial silicon transistor, which can be used as a low frequency power amplifier.

■ FEATURES

* Low frequency power amplifier

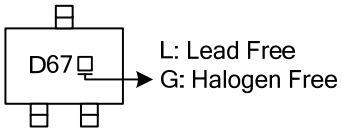
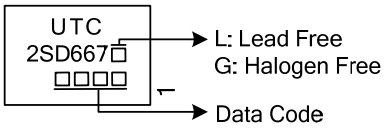
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD667L-x-AE3-R	2SD667G-x-AE3-R	SOT-23	E	B	C	Tape Reel
2SD667L-x-T9N-B	2SD667G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SD667L-x-T9N-K	2SD667G-x-T9N-K	TO-92NL	E	C	B	Bulk

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

2SD667G-x-AE3-R (1)Packing Type (2)Package Type (3)Rank (4)Green Package	(1) R: Tape Reel, B: Tape Box, K: Bulk (2) AE3: SOT-23, T9N: TO-92NL (3) refer to CLASSIFICATION OF h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-23	TO-92NL
	

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Collector to Base Voltage		V_{CBO}	120	V
Collector to Emitter Voltage		V_{CEO}	80	V
Emitter to Base Voltage		V_{EBO}	6	V
Collector Current		I_C	1.0	A
Collector Peak Current (Note2)		I_{CP}	2.0	A
Collector Power Dissipation	SOT-23	P_C	0.35	W
	TO-92NL		0.9	W
Junction Temperature		T_J	+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≤10ms, Duty cycle≤20%.

■ ELECTRICAL CHARACTERISTICS

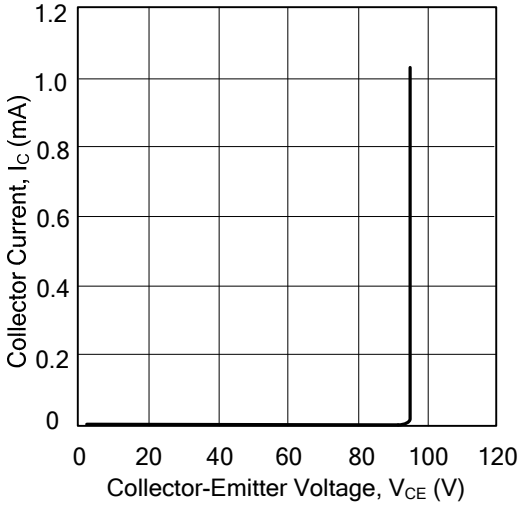
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	I_C=10μA, I_E=0	120			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, R_{BE}=∞	80			V
Emitter to Base Breakdown Voltage	BV_{EBO}	I_E=10μA, I_C=0	6			V
Collector Cutoff Current	I_{CBO}	V_{CB}=120V, I_E=0			500	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=6V, I_C=0			500	nA
DC Current Transfer Ratio	h_{FE1}	V_{CE}=5V, I_C=150mA	60		320	
	h_{FE2}	V_{CE}=5V, I_C=500mA	40			
Collector to Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=500mA, I_B=50mA			0.5	V
Base to Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=500mA, I_B=50mA			1.1	V
Gain Bandwidth Product	f_T	V_{CE}= -5V, I_C= -150mA		140		MHz
Collector Output Capacitance	C_{ob}	V_{CB}= -10V, I_E=0, f=1MHz		20		pF

■ CLASSIFICATION OF h_{FE1}

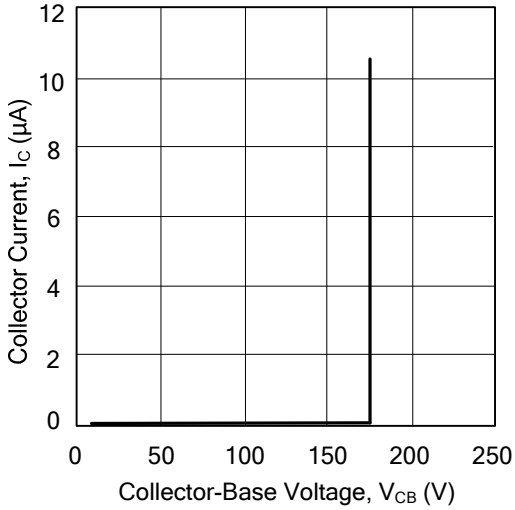
RANK	B	C	D
RANGE	60-120	100-200	160-320

■ TYPICAL CHARACTERISTICS

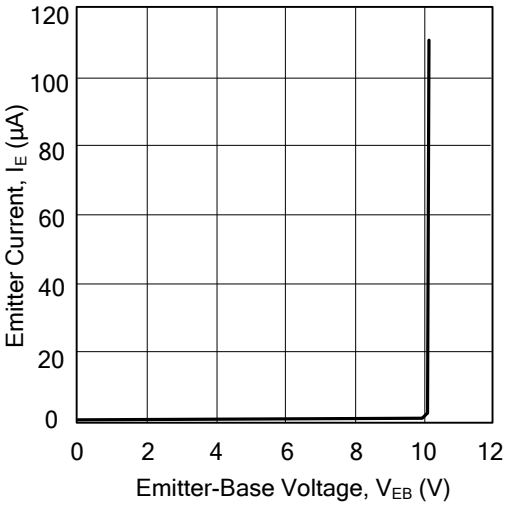
Collector Current vs. Collector-Emitter Voltage



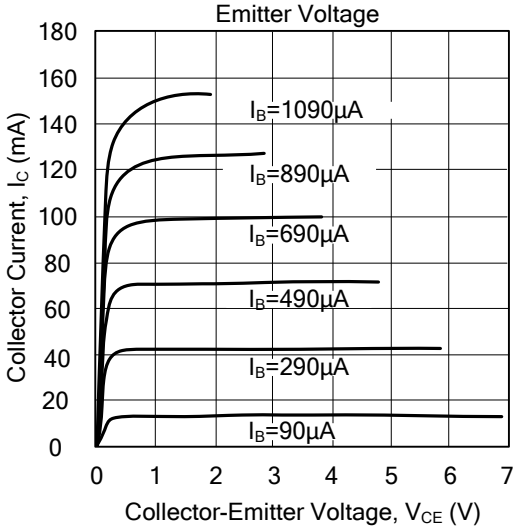
Collector Current vs. Collector-Base Voltage



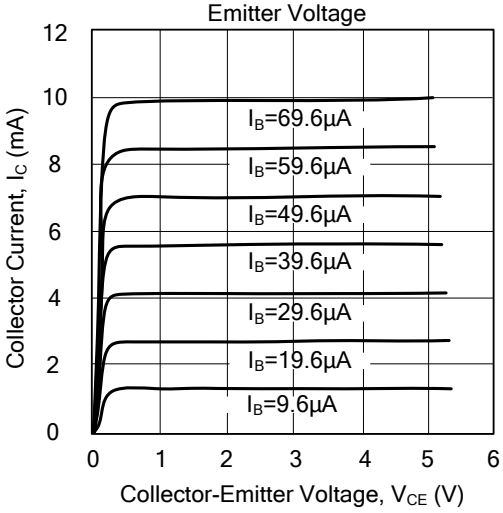
Emitter Current vs. Emitter-Base Voltage



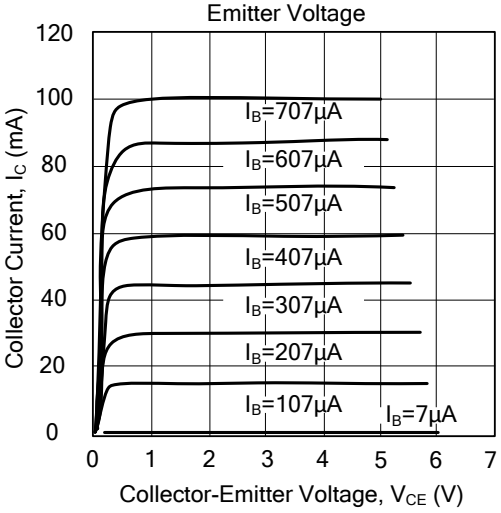
Collector Current vs. Collector-Emitter Voltage



Collector Current vs. Collector-Emitter Voltage



Collector Current vs. Collector-Emitter Voltage



■ TYPICAL CHARACTERISTICS