



2SD667

NPN SILICON TRANSISTOR

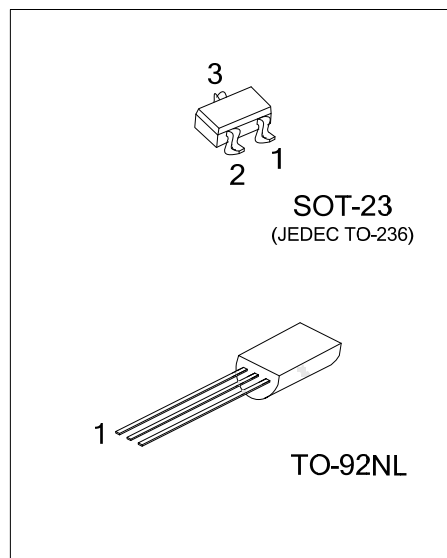
SILICON NPN EPITAXIAL

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

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

SOT-23	TO-92NL
<p>D67</p> <p>L: Lead Free</p> <p>G: Halogen Free</p>	<p>UTC</p> <p>2SD667</p> <p>□□□□</p> <p>L: Lead Free</p> <p>G: Halogen Free</p> <p>Data Code</p>

■ 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. $P_W \leq 10\text{ms}$, Duty cycles $\leq 20\%$.

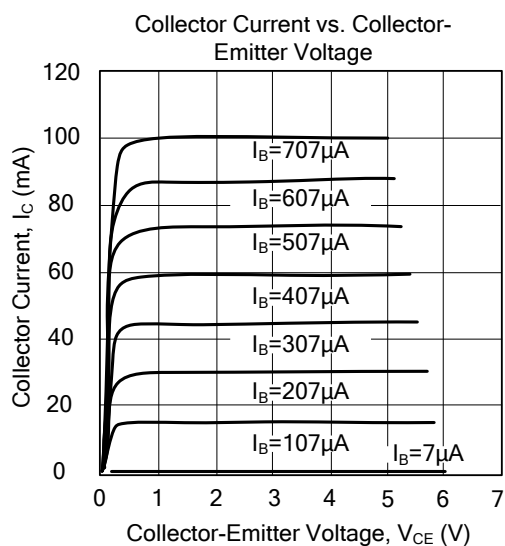
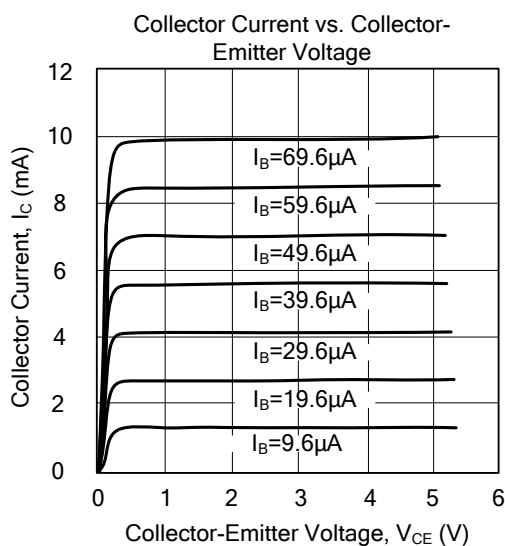
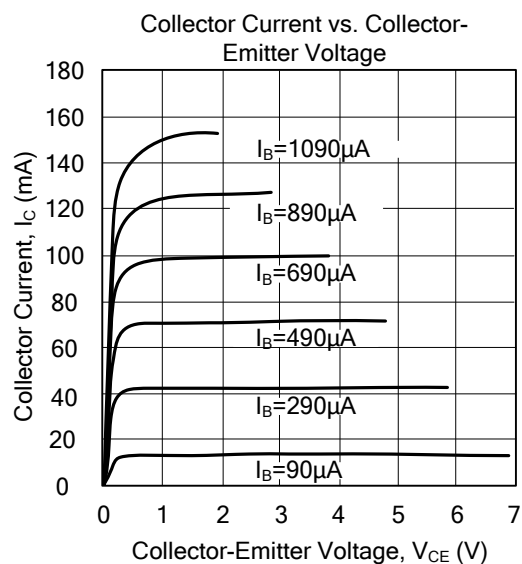
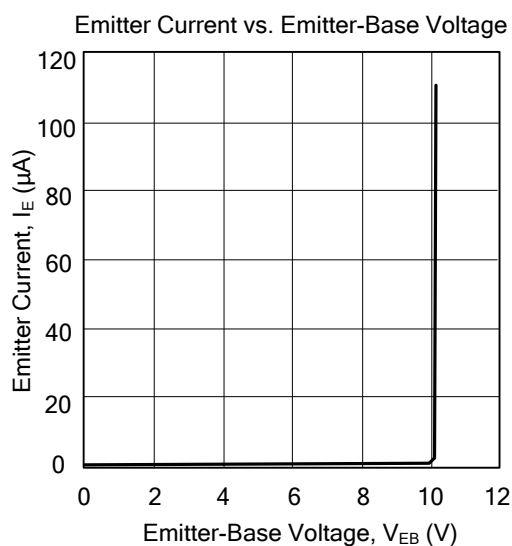
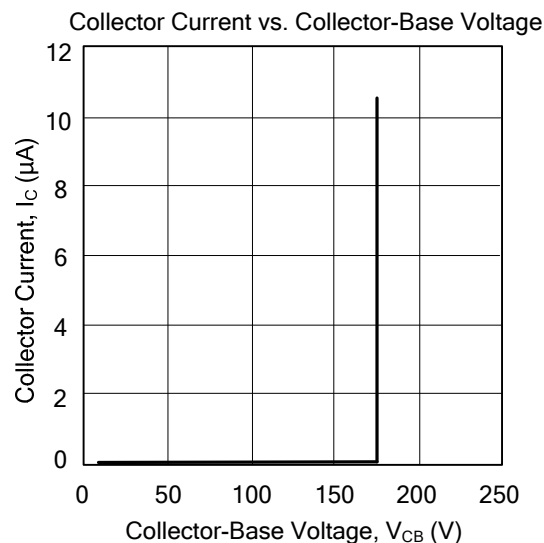
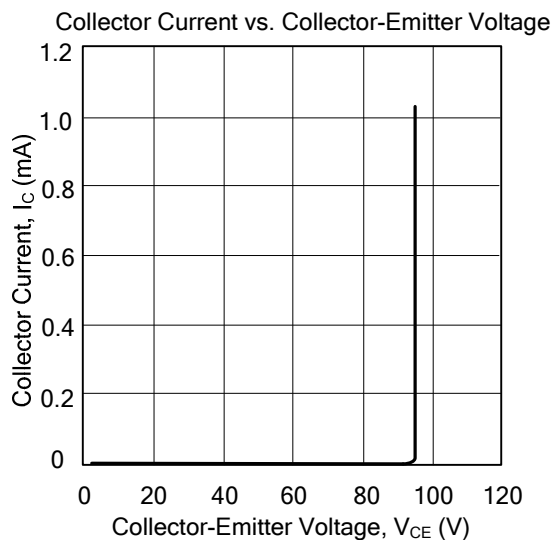
■ ELECTRICAL CHARACTERISTICS

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

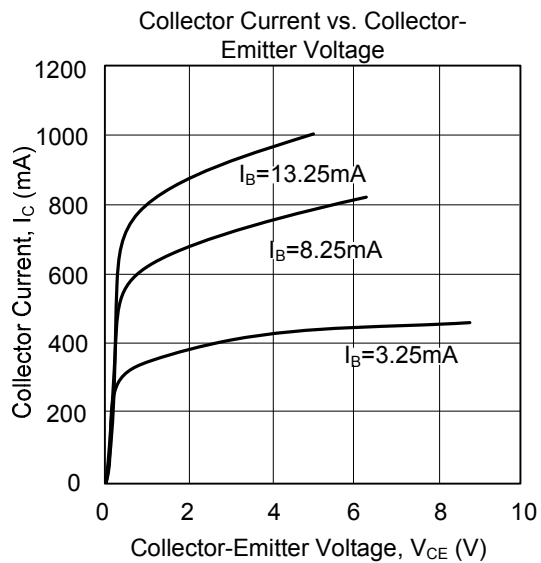
■ CLASSIFICATION OF h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS



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