



2SD667

NPN SILICON TRANSISTOR

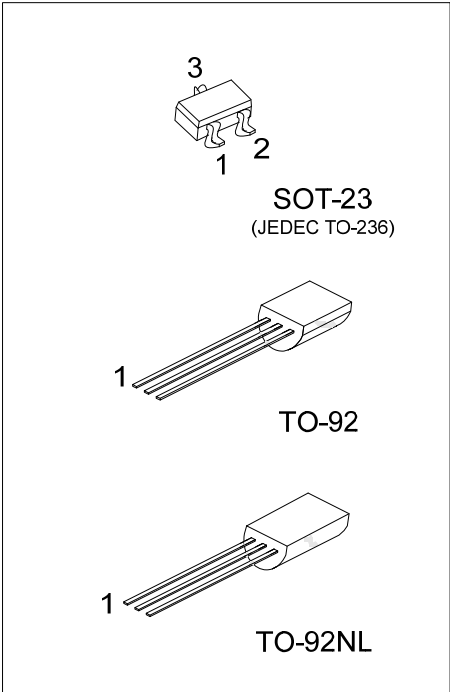
SILICON NPN EPITAXIAL

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



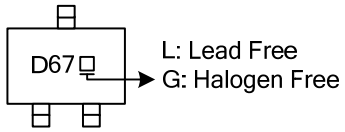
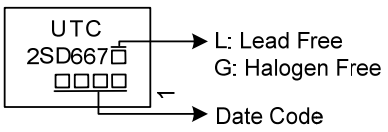
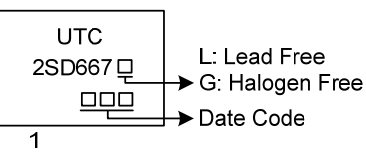
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD667L-x-AE3-R	2SD667G-x-AE3-R	SOT-23	B	E	C	Tape Reel
2SD667L-x-T92-B	2SD667G-x-T92-B	TO-92	E	C	B	Tape Box
2SD667L-x-T92-K	2SD667G-x-T92-K	TO-92	E	C	B	Bulk
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: B: Base E: Emitter C: Collector

<p>2SD667G-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk (2) AE3: SOT-23, T92: TO-92, T9N: TO-92NL (3) refer to CLASSIFICATION OF h_{FE1} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-23	TO-92NL
 <p>L: Lead Free G: Halogen Free</p>	 <p>L: Lead Free G: Halogen Free Date Code</p>
TO-92	-
 <p>L: Lead Free G: Halogen Free Date Code</p> <p>1</p>	-

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

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-92		0.9	W
	TO-92NL			
Junction Temperature		T_J	+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

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 cycle $\leq 20\%$.

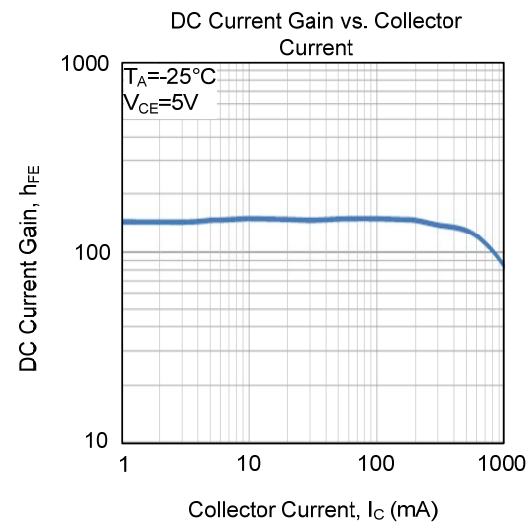
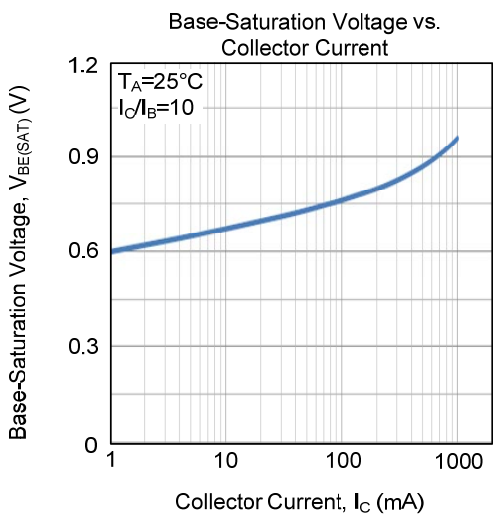
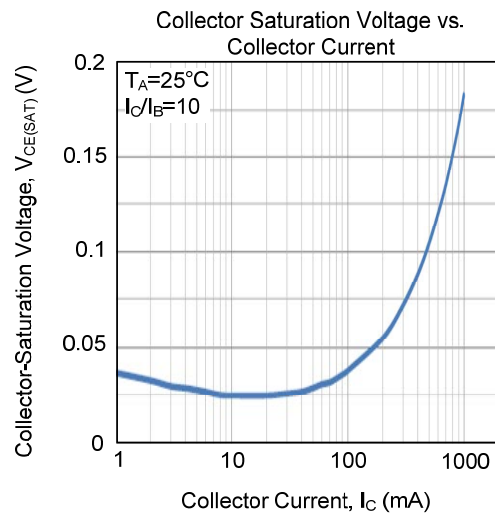
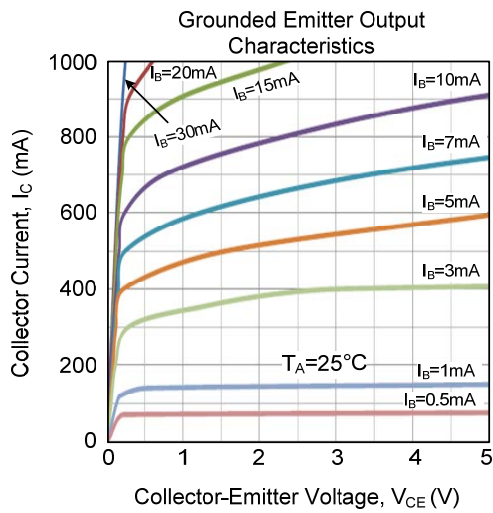
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

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



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