

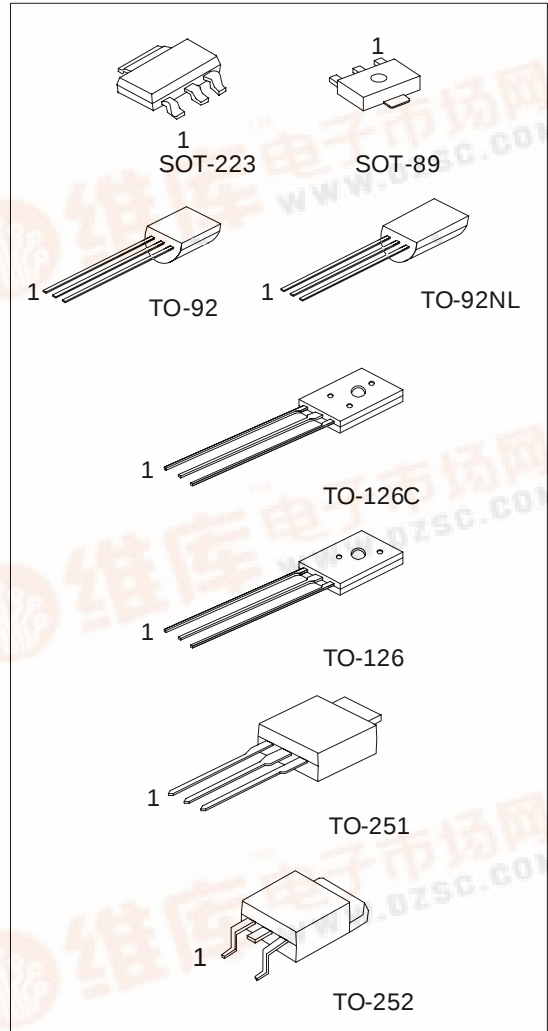


UNISONIC TECHNOLOGIES CO., LTD

2SD669/A**NPN SILICON TRANSISTOR****BIPOLAR POWER GENERAL PURPOSE TRANSISTOR**

■ APPLICATIONS

* Low frequency power amplifier complementary pair with UTC 2SB649/A



*Pb-free plating product number:

2SD669L/2SD669AL

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SD669-x-AA3-R	2SD669L-x-AA3-R	SOT-223	B	C	E	Tape Reel
2SD669-x-AB3-R	2SD669L-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SD669-x-T60-K	2SD669L-x-T60-K	TO-126	E	C	B	Bulk
2SD669-x-T6C-R	2SD669L-x-T6C-R	TO-126C	E	C	B	Bulk
2SD669-x-T92-B	2SD669L-x-T92-B	TO-92	E	C	B	Tape Box
2SD669-x-T92-K	2SD669L-x-T92-K	TO-92	E	C	B	Bulk
2SD669-x-T9N-B	2SD669L-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SD669-x-T9N-K	2SD669L-x-T9N-K	TO-92NL	E	C	B	Bulk
2SD669-x-T9N-R	2SD669L-x-T9N-R	TO-92NL	E	C	B	Tape Reel
2SD669-x-TM3-T	2SD669L-x-TM3-T	TO-251	E	C	B	Tube
2SD669-x-TN3-R	2SD669L-x-TN3-R	TO-252	B	C	E	Tape Reel
2SD669-x-TN3-T	2SD669L-x-TN3-T	TO-252	B	C	E	Tube

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NPN SILICON TRANSISTOR

■ ORDERING INFORMATION(Cont.)

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SD669A-x-AA3-R	2SD669AL-x-AA3-R	SOT-223	B	C	E	Tape Reel
2SD669A-x-AB3-R	2SD669AL-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SD669A-x-T60-K	2SD669AL-x-T60-K	TO-126	E	C	B	Bulk
2SD669A-x-T6C-R	2SD669AL-x-T6C-R	TO-126C	E	C	B	Bulk
2SD669A-x-T92-B	2SD669AL-x-T92-B	TO-92	E	C	B	Tape Box
2SD669A-x-T92-K	2SD669AL-x-T92-K	TO-92	E	C	B	Bulk
2SD669A-x-T9N-B	2SD669AL-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SD669A-x-T9N-K	2SD669AL-x-T9N-K	TO-92NL	E	C	B	Bulk
2SD669A-x-T9N-R	2SD669AL-x-T9N-R	TO-92NL	E	C	B	Tape Reel
2SD669A-x-TM3-T	2SD669AL-x-TM3-T	TO-251	E	C	B	Tube
2SD669A-x-TN3-R	2SD669AL-x-TN3-R	TO-252	B	C	E	Tape Reel
2SD669A-x-TN3-T	2SD669AL-x-TN3-T	TO-252	B	C	E	Tube

2SD669L-x-AB3-R (1)Packing Type (2)Package Type (3)Rank (4)Lead Plating	(1) K: Bulk, R: Tape Reel, T: Tube (2) AA3: SOT-223, AB3: SOT-89, T60: TO-126, T6C: TO-126C, TM3: TO-251, TN3: TO-252, T92: TO-92, T9N: TO-92NL (3) x: refer to Classification of h_{FE1} (4) L: Lead Free Plating, Blank: Pb/Sn
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2SD669/A

NPN SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATING (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	120	V
		160	
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1.5	A
Collector Peak Current	$I_{C(PEAK)}$	3	A
Collector Power Dissipation	P_D	0.5	W
Collector Power Dissipation		1	W
Junction Temperature	T_J	+150	
Storage Temperature	T_{STG}	-40 ~ +150	

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 , unless otherwise specified)

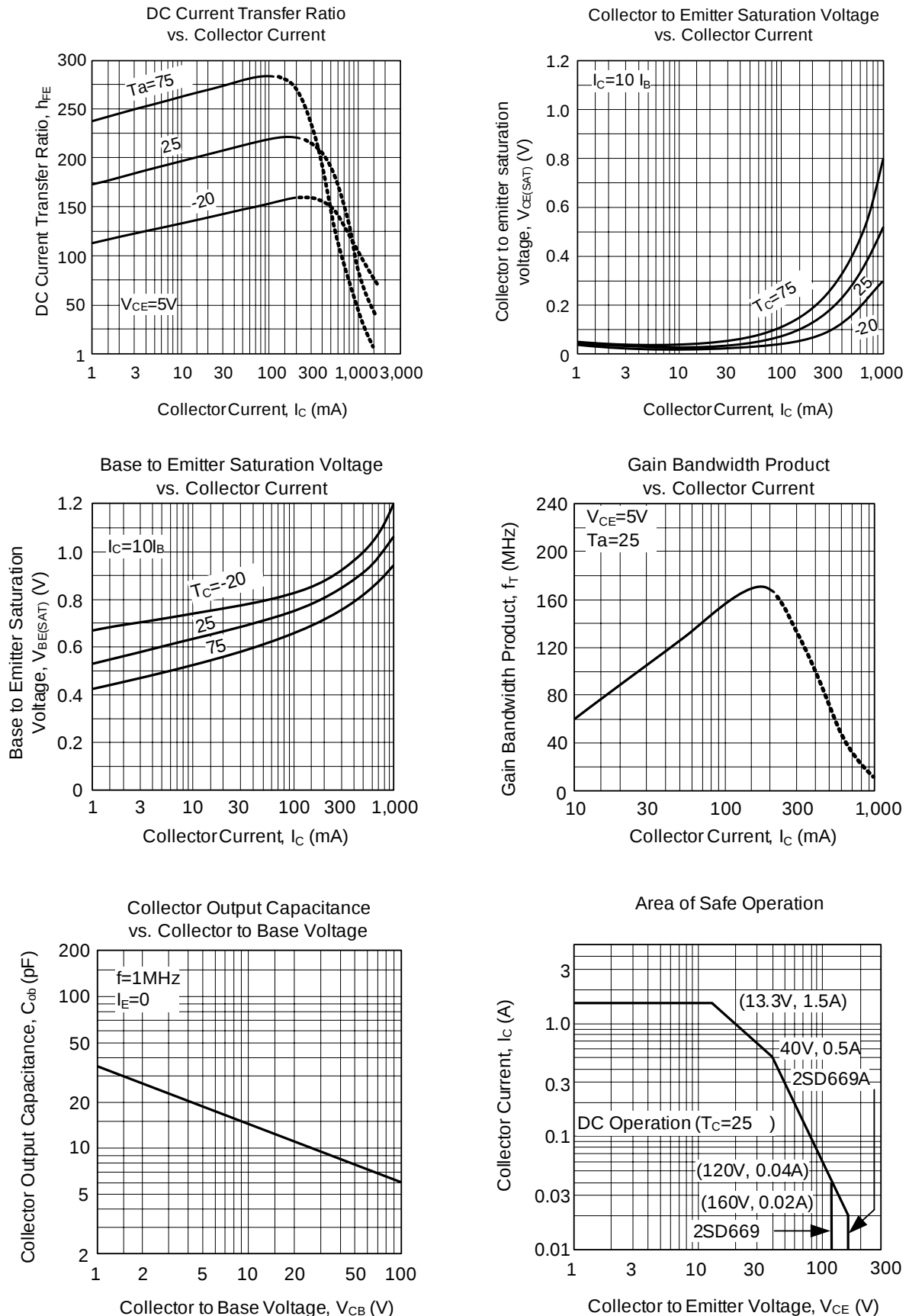
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	$I_C=1mA, I_E=0$	180			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	$I_C=10mA, R_{BE}=\infty$	120			V
			160			
Emitter to Base Breakdown Voltage	BV_{EBO}	$I_E=1mA, I_C=0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=160V, I_E=0$			10	μA
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=150mA$ (Note)	60		320	
	h_{FE2}	$V_{CE}=5V, I_C=500mA$ (Note)	30			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=600mA, I_B=50mA$ (Note)			1	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=5V, I_C=150mA$ (Note)			1.5	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5V, I_C=150mA$ (Note)		140		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		14		pF

Note: Pulse test.

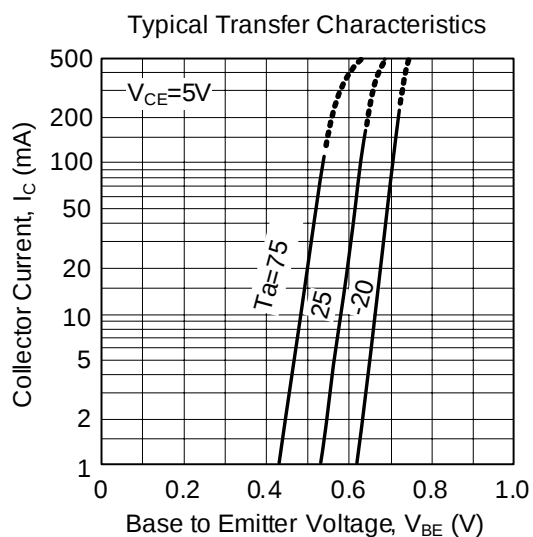
■ CLASSIFICATION OF h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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