



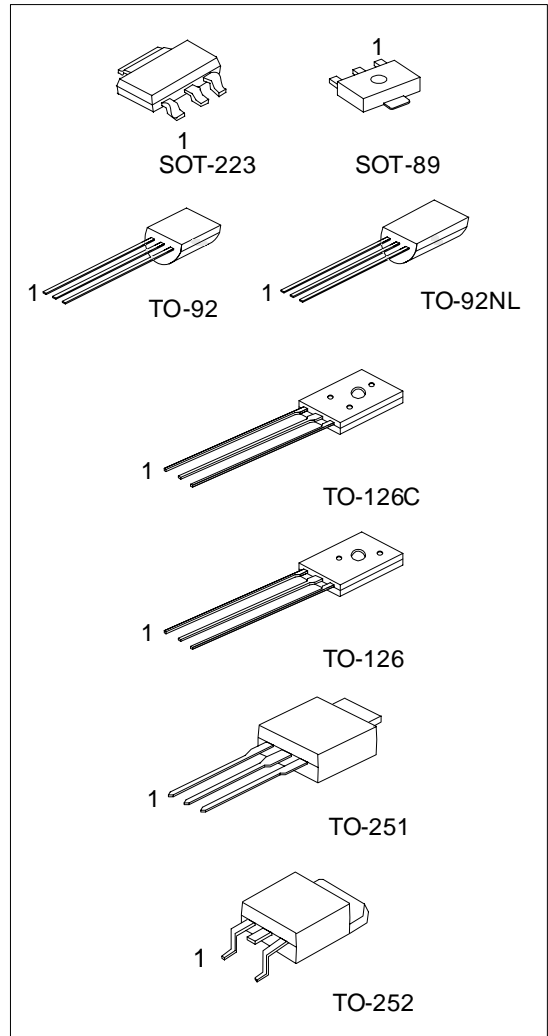
2SD669/A

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

■ 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

<p>2SD669L-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p>	<p>(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</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V _{CB0}	180	V	
Collector-Emitter Voltage	2SD669	120	V	
	2SD669A	160		
Emitter-Base Voltage	V _{EBO}	5	V	
Collector Current	I _C	1.5	A	
Collector Peak Current	I _{C(PK)}	3	A	
Collector Power Dissipation	P _D	SOT-223	0.5	W
Collector Power Dissipation		TO-126	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)

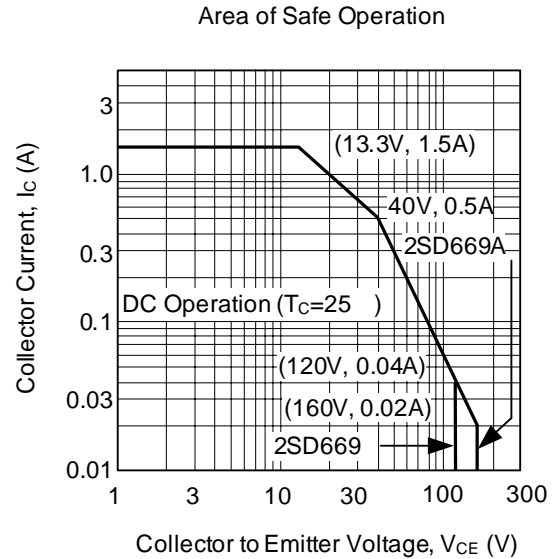
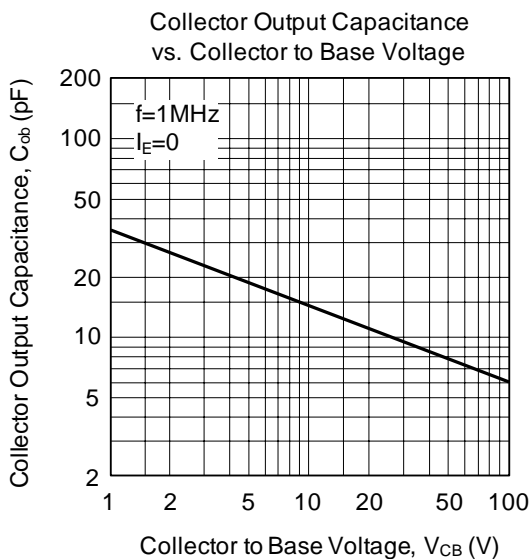
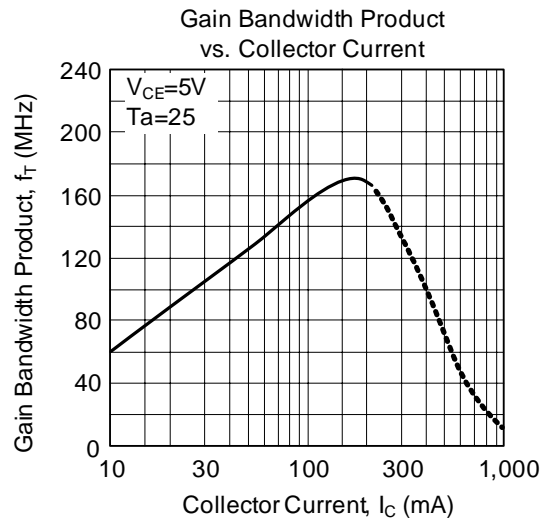
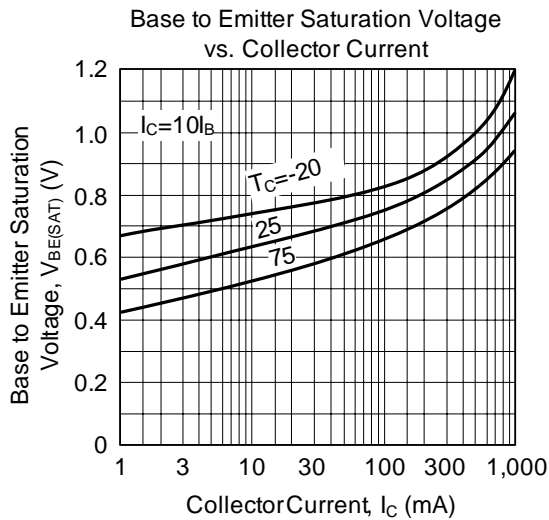
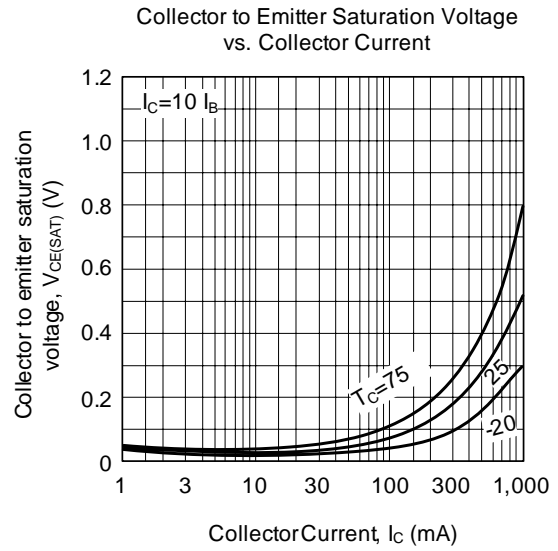
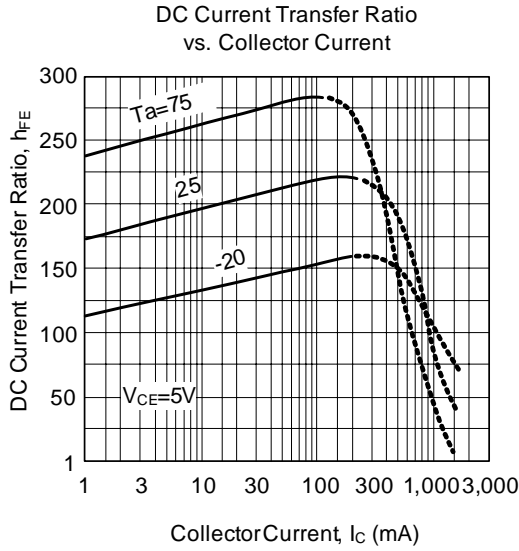
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV _{CB0}	I _C =1mA, I _E =0	180			V
Collector to Emitter Breakdown Voltage	BV _{CEO}	I _C =10mA, R _{BE} =∞	2SD669	120		V
			2SD669A	160		
Emitter to Base Breakdown Voltage	BV _{EBO}	I _E =1mA, I _C =0	5			V
Collector Cut-off Current	I _{CB0}	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.

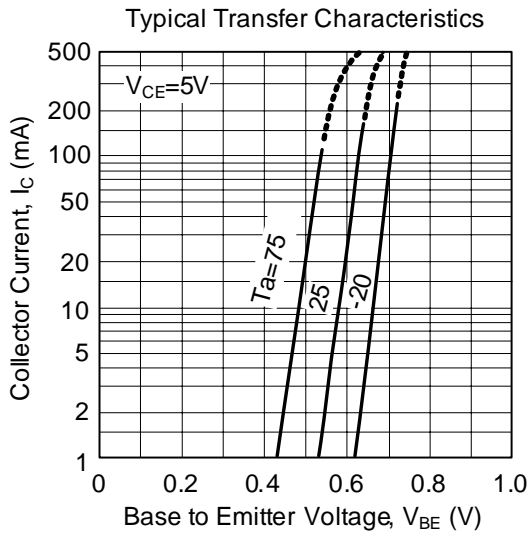
■ CLASSIFICATION OF h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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