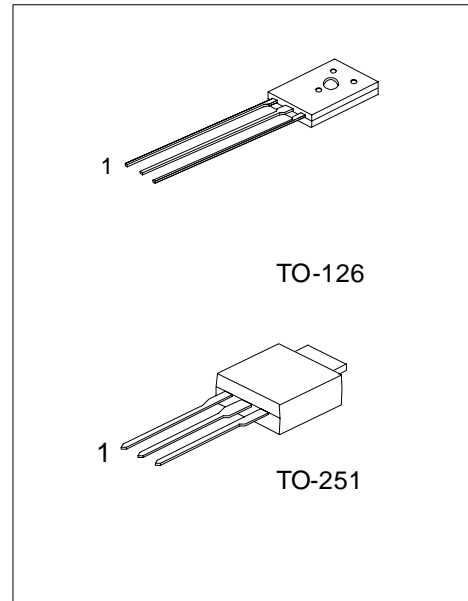




2SD669/A

NPN EPITAXIAL SILICON TRANSISTOR

BIPOLAR POWER GENERAL PURPOSE TRANSISTOR



*Pb-free plating product number: 2SD669/AL

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SD669-x-T60-A-K	2SD669L-x-T60-A-K	TO-126	E	C	B	Bulk
2SD669A-x-T60-A-K	2SD669AL-x-T60-A-K	TO-126	E	C	B	Bulk
2SD669-x-TM3-A-T	2SD669L-x-TM3-A-T	TO-251	E	C	B	Tube
2SD669A-x-TM3-A-T	2SD669AL-x-TM3-A-T	TO-251	E	C	B	Tube

Note: x: Rank, refer to Classification of h_{FE1}

<p>2SD669L-x-T60-A-K</p>	<p>(1)Packing Type (2)Pin Assignment (3)Package Type (4)Rank (5)Lead Plating</p> <p>(1) K: Bulk, T: Tube (2) refer to Pin Assignment (3) T60: TO-126, TM3: TO-251 (4) x: refer to Classification of h_{FE1} (5) 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 _{CBO}	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(PEAK)}	3	A
Collector power dissipation	P _D	1	W
Collector power dissipation (T _C =25)	P _D	20	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)

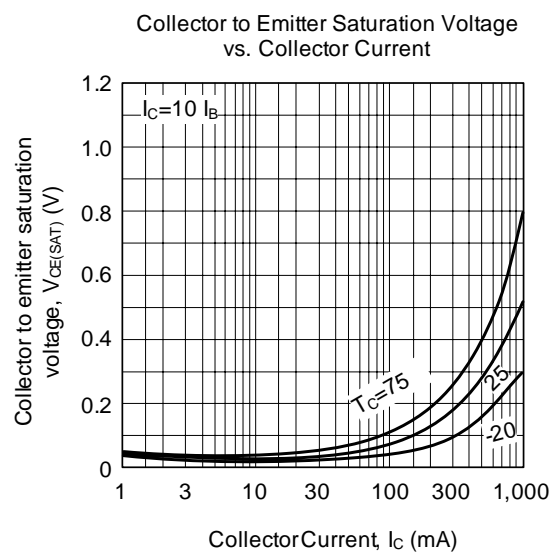
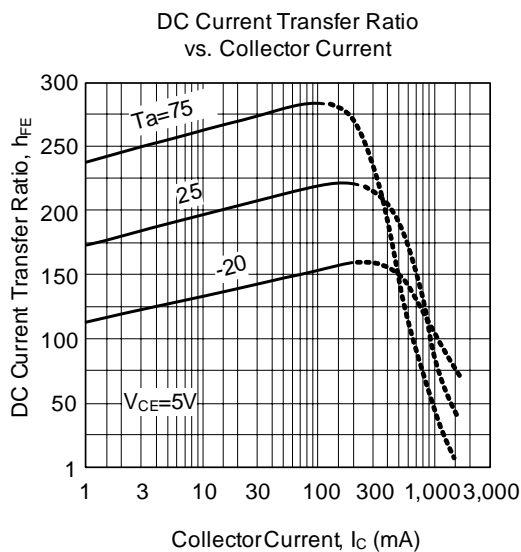
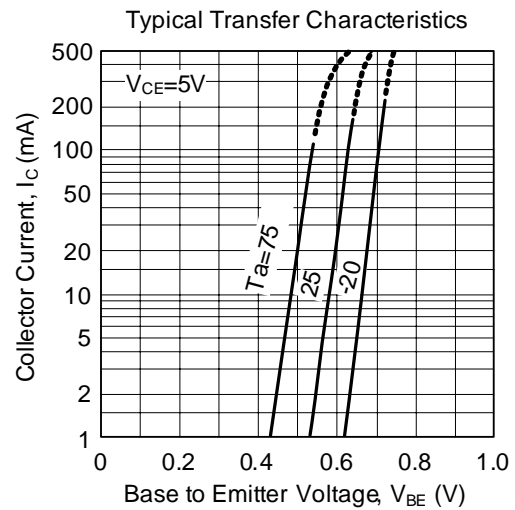
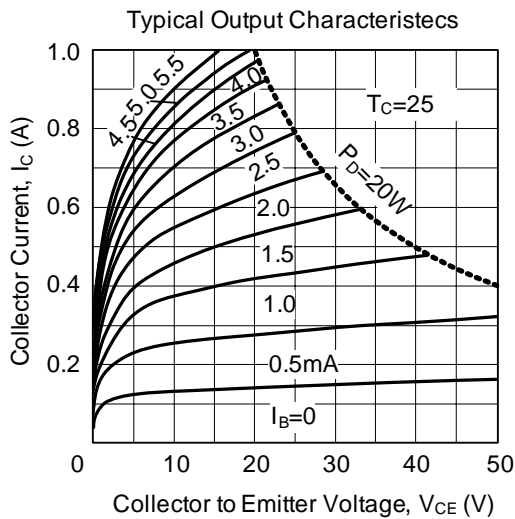
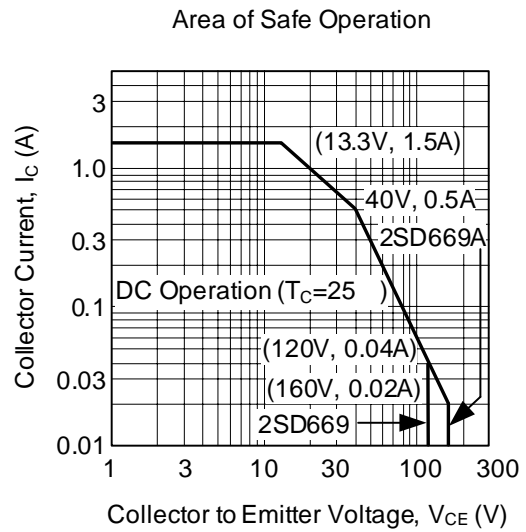
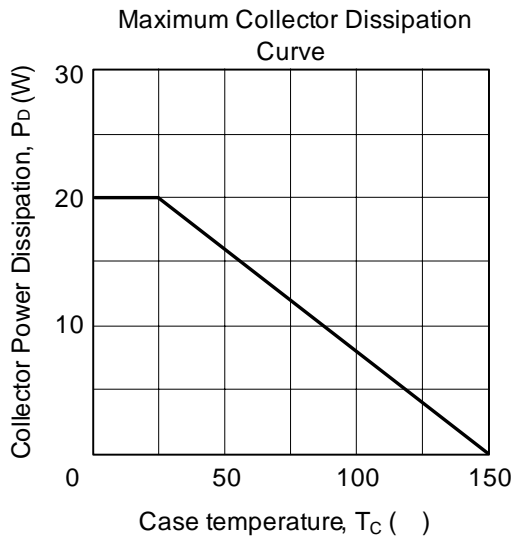
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to base breakdown voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	180			V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C =10mA, R _{BE} =∞	2SD669	120		V
			2SD669A	160		
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	5			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	
		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.

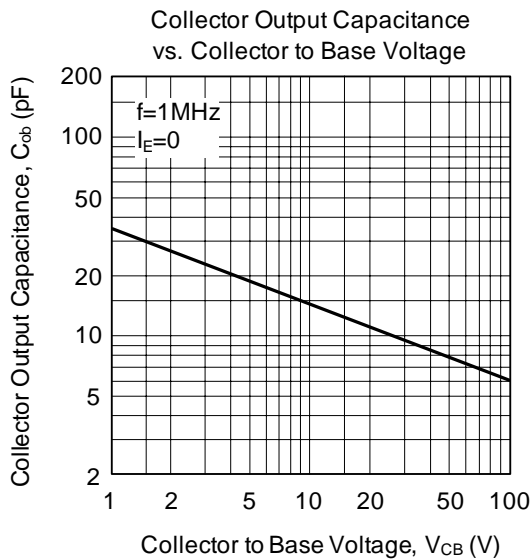
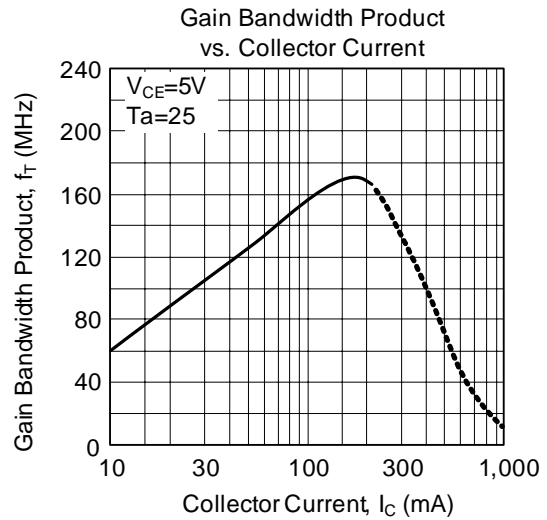
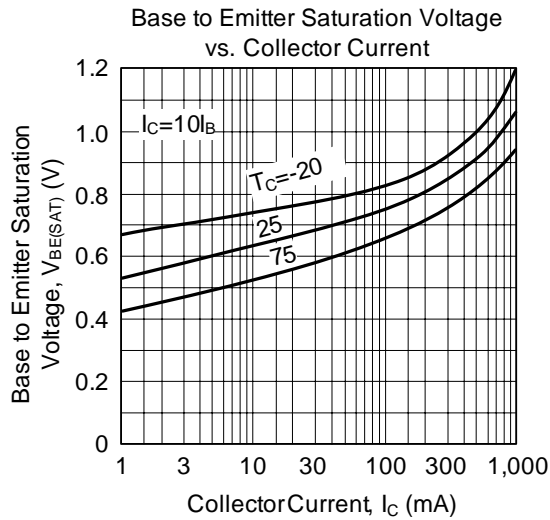
■ CLASSIFICATION OF h_{FE1}

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

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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