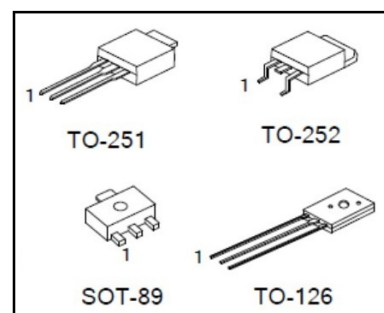


2SB649

- Complementary to 2SD669
- Package: TO-126/TO-251/TO-252/SOT-89

Maximum Ratings (Ta = 25°)

Parameter	Symbol	Rating	Unit
Collector-base voltage	BV_{CBO}	-180	V
Collector-emitter voltage	BV_{CEO}	-120	V
Emitter-base voltage	BV_{EBO}	-5	V
Collector current	I_{CM}	-1.5	A
Collector Power Dissipation	P_C	TO-126	1
		SOP-89	0.5
		TO-251	1
		TO-252	2
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C



Pin Assignment			
Package	1	2	3
TO-126	E	C	B
TO-251/252	B	C	E
SOT-89	B	C	E

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -1mA, I_E = 0$	-180			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10mA, I_B = 0$	-160			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -1mA, I_C = 0$	--5			V
collector-base cut-off current	I_{CBO}	$V_{CB} = -180V, I_E = 0$			-1	μA
collector-emitter cut-off current	I_{CEO}	$V_{CE} = -160V, I_B = 0$			-10	μA
emitter-base cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1	μA
DC current gain	H_{FE1}	$V_{CE} = -5V, I_C = -150mA$	60		320	
	H_{FE2}	$V_{CE} = -5V, I_C = -500mA$	30			
collector-emitter saturation voltage	V_{CESAT}	$I_C = -500mA, I_B = -50mA$			-0.9	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5V, I_C = -150mA$			-1.5	
Transition frequency	f_T	$V_{CE} = -5V, I_C = -150mA$		140		MHz

Classification of H_{FE}

Rank	2SB649-B	2SB649-C	2SB649-D
Range	60-120	100-200	160-320