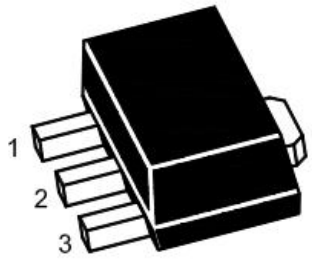
Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

FEATURE

- Low Frequency Power Amplifier Complementary Pair with 2SB649

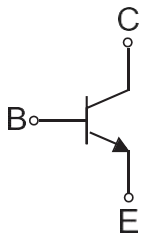


1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

- **MARKING:D669**

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector- Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base V oltage	5	V
I_C	Collector Current -Continuous	1.5	A
P_C	Collector Dissipation	0.75	W
$R_{\theta JA}$	Thermal Resistance f rom Junction to Ambient	167	℃/ W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55 ~+ 150	℃

ELECTRICAL CHARACTERISTICS

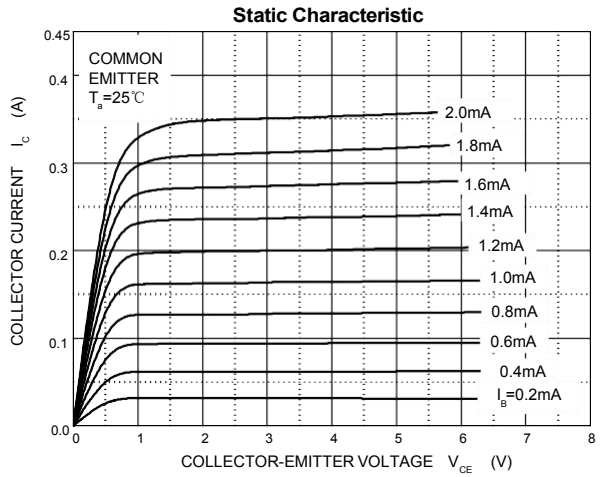
T_a=25℃ unless otherwise specified

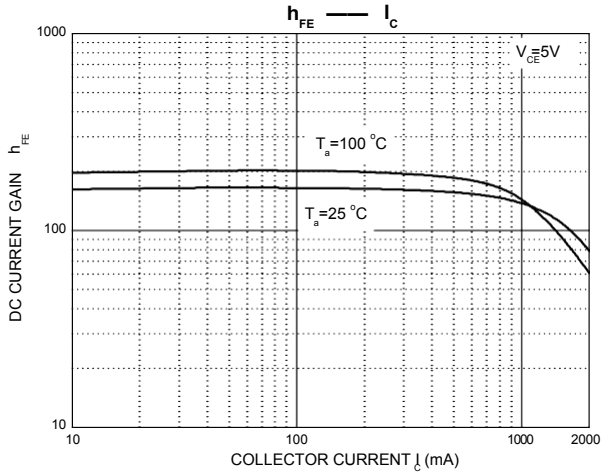
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA, I_E=0	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=160V, I_E=0			10	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=150mA	60		320	
	$h_{FE(2)}$	V_{CE}=5V, I_C=500mA	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=600mA, I_B=50mA			1	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=150mA			1.5	V
Transition frequency	f_T	V_{CE}=5V, I_C=150mA		140		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		14		pF

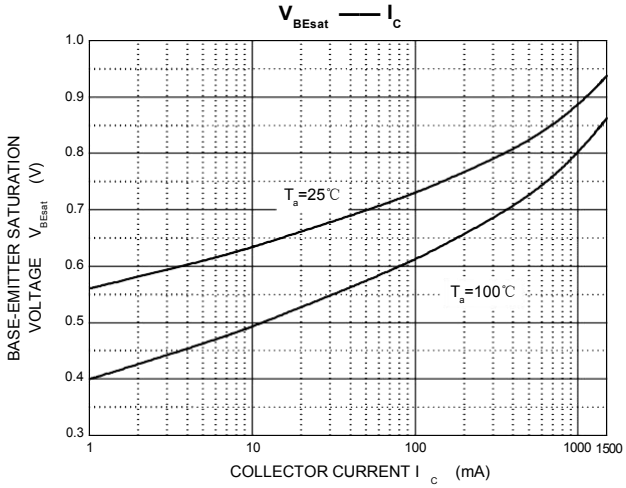
CLASSIFICATION of $h_{FE(1)}$

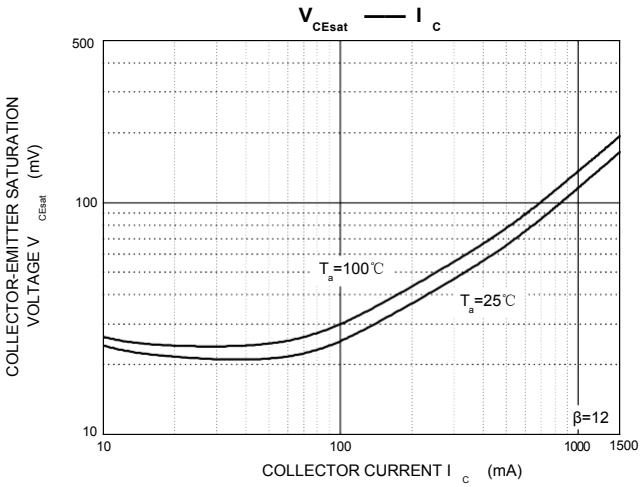
Rank	B	C	D
Range	60-120	100-200	160-320

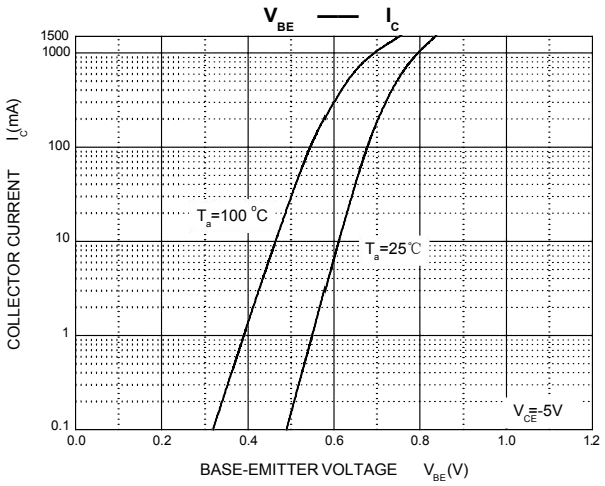
Typical Characteristics

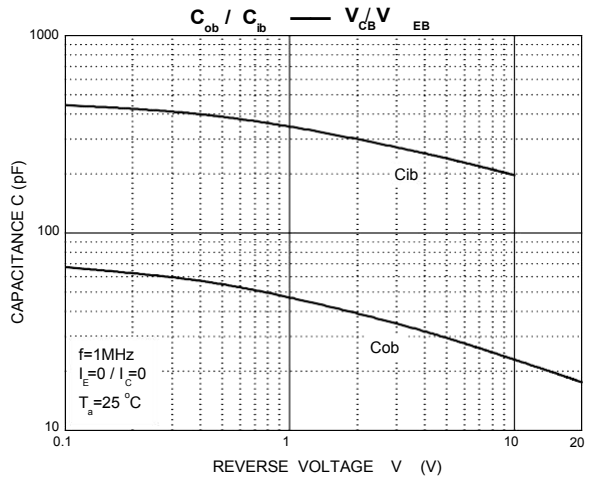












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