DATA SHEET

SEMICONDUCTOR

2SC5658

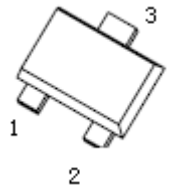
General Purpose Transistor (NPN)

FEATURES

- Low C_{ob}

Marking: BQ BR BS

SOT-723



1. BASE
2. EMITTER
3. COLLECTOR

Absolute maximum ratings (T_a=25℃unless otherwise noted)

Symbol	Parameter	Limit	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	150	mA
P_C	Collector Dissipation	100	mW
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=50μA,I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA,I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=7V,I_C=0			0.1	μA
DC current transfer ratio	h_{FE}	V_{CE}=6V,I_C=1mA	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA,I_B=5mA			0.4	V
Transition frequency	f_T	V_{CE}=12V,I_C=2mA, f=100MHz		180		MHz
Output capacitance	C_{ob}	V_{CB}=12V,I_E=0, f=1MHz			3.5	pF

Classification of h_{FE}

Rank	Q	R	S
Range	120~270	180~390	270~560

DEVICE CHARACTERISTICS

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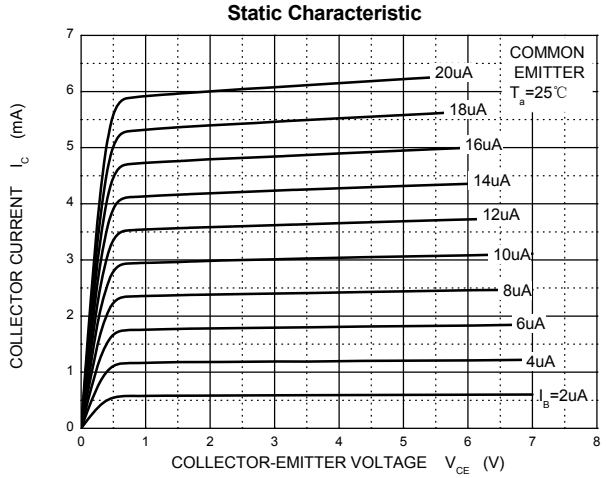

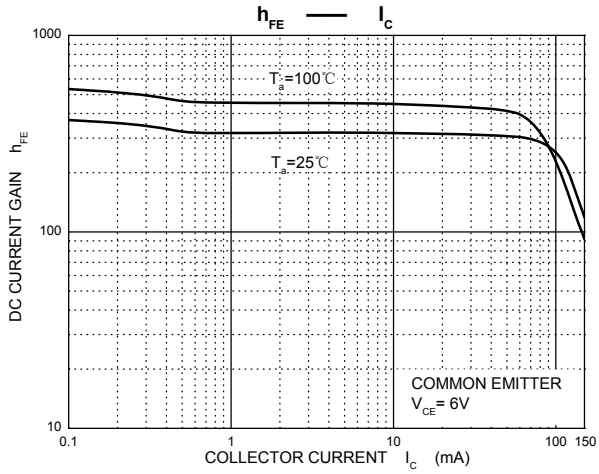

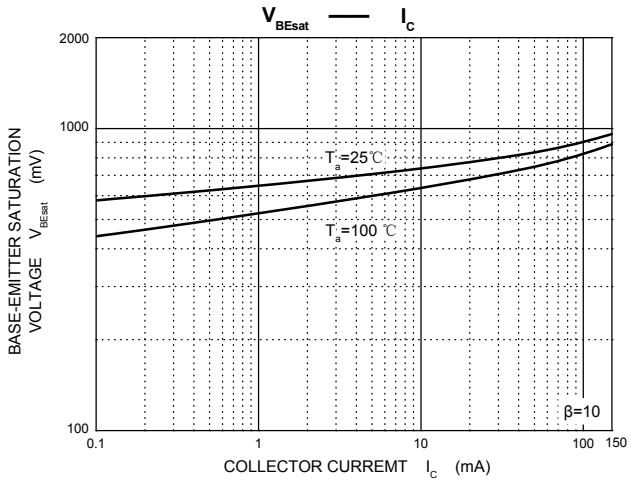

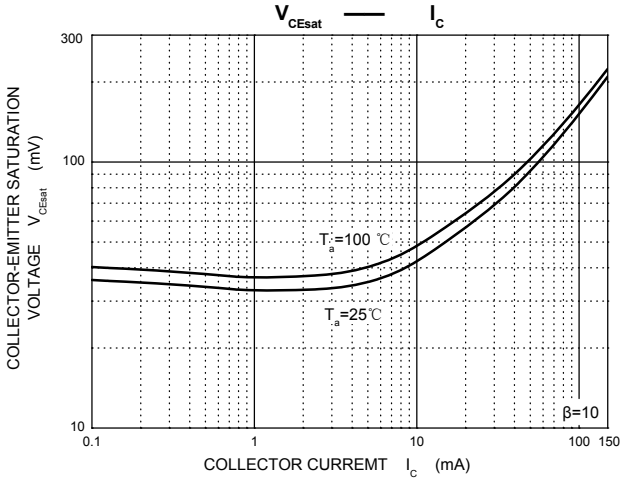

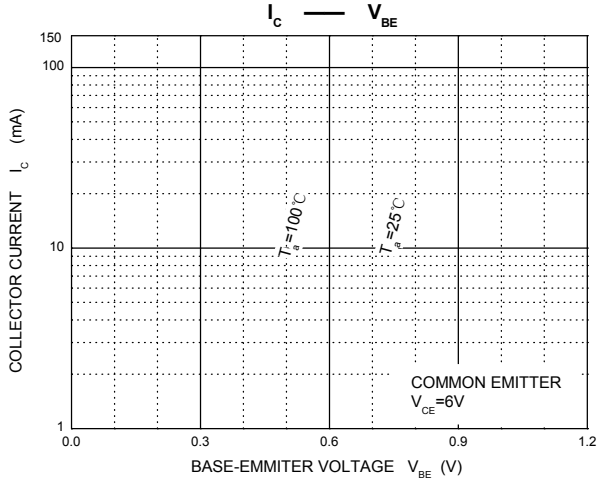

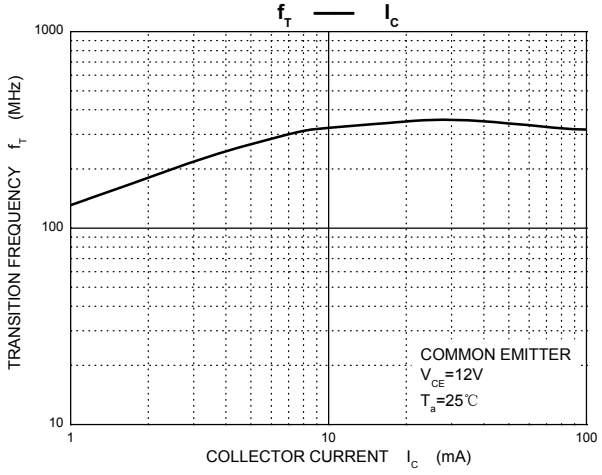

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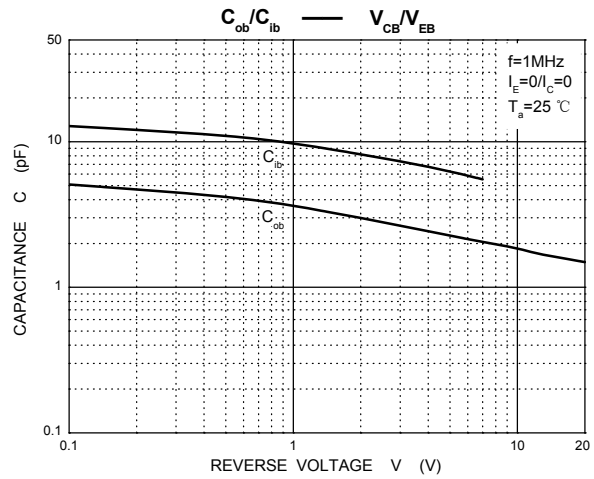
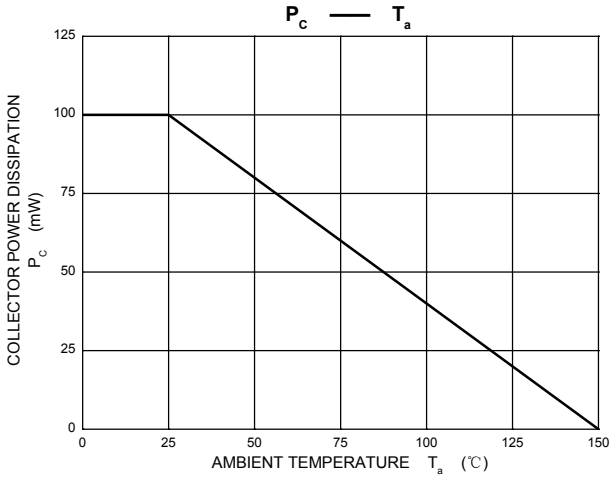
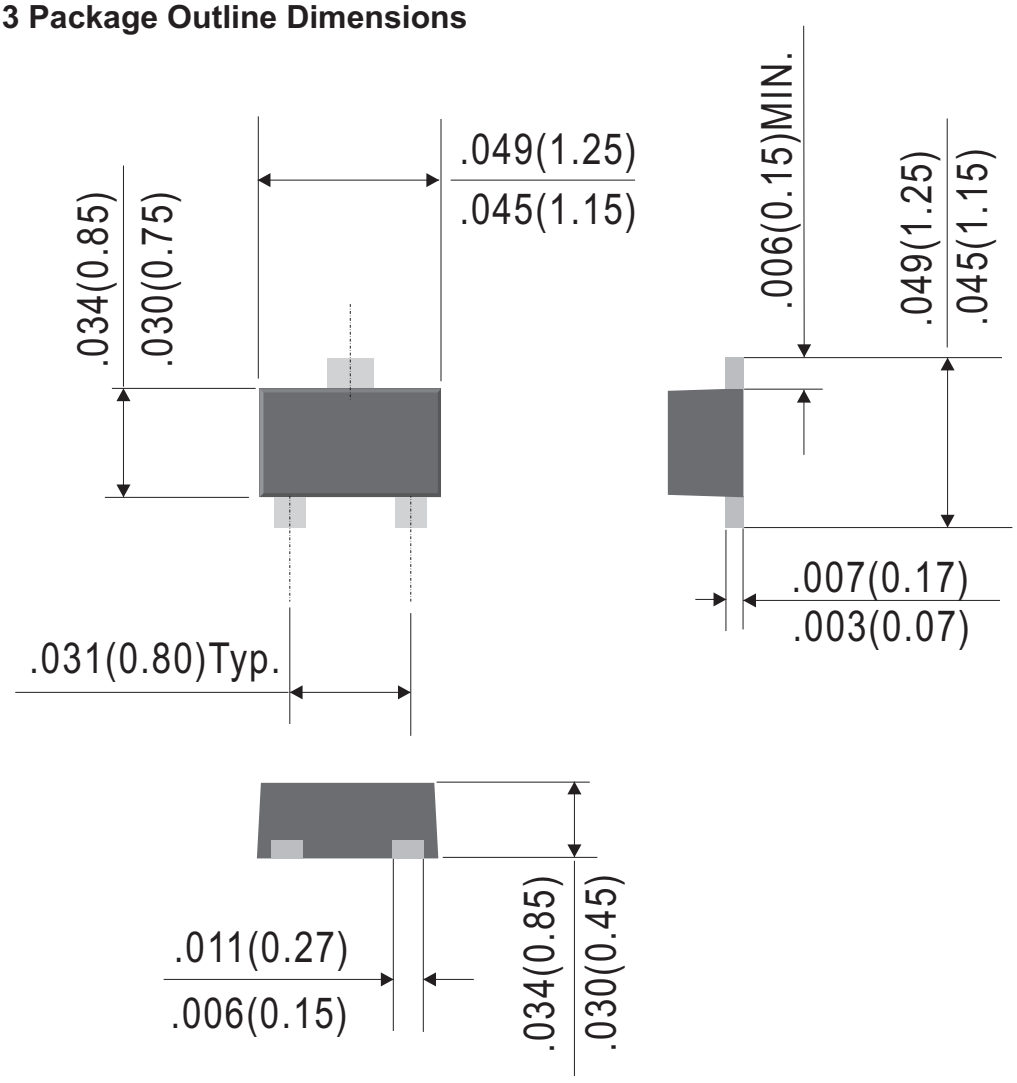




PACKAGE OUTLINE & DIMENSIONS

2SC5658

SOT-723 Package Outline Dimensions



Dimensions in inches and (millimeters)

SOT-723 Suggested Pad Layout