

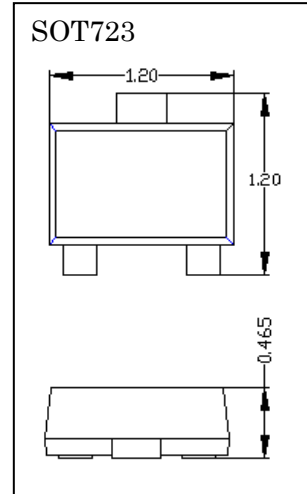
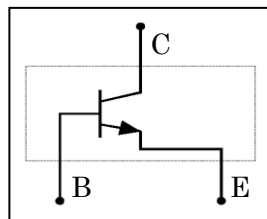
DATA SHEET

2SC5658

- ◇ Small Outline Surface Mount Package
- ◇ RoHS Compliant / Green EMC

Device Marking Code	
2SC5658	BQ, BR, BS

Equivalent Circuit



Maximum Ratings (Ta=25°C Unless Otherwise Noted)

Symbol	Parameter	Value	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	150	mA
P_C	Collector Power Dissipation	100	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

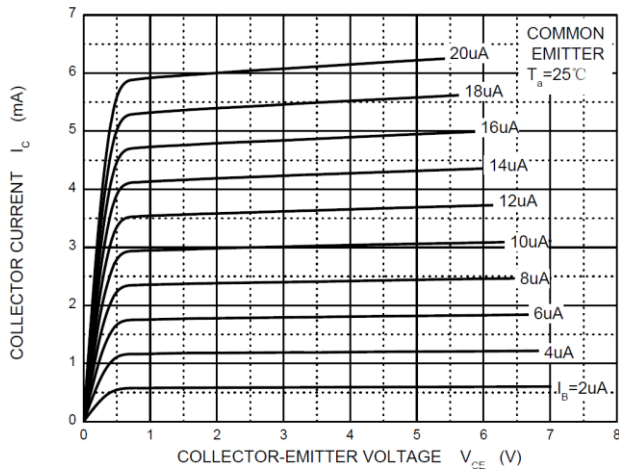
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1mA, I_B=0$	50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=50\mu A, I_E=0$	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\mu A, I_C=0$	7			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=60V, I_E=0$			0.1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7V, I_C=0$			0.1	μA
h_{FE}	DC Current Gain	$V_{CE}=6V, I_C=1mA$	120		560	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=50mA, I_B=5mA$			0.4	V
f_T	Current Gain-Bandwidth Product	$V_{CE}=12V, I_C=2mA, f=100MHz$		180		MHz
C_{ob}	Output Capacitance	$V_{CB}=12V, I_E=0, f=1MHz$			3.5	pF

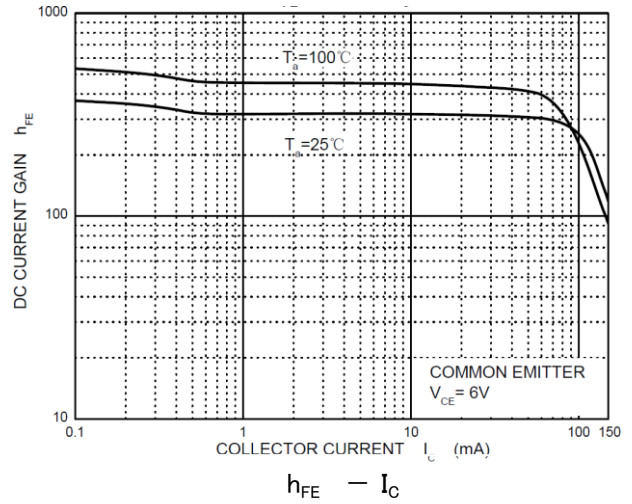
Classification of h_{FE}

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

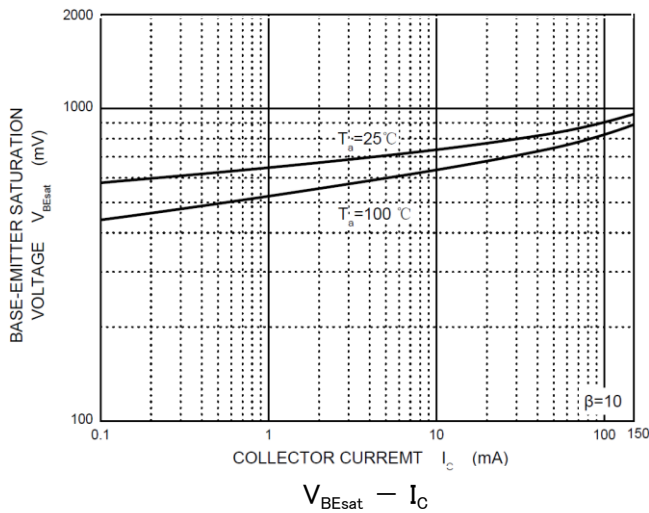
Typical Characteristics



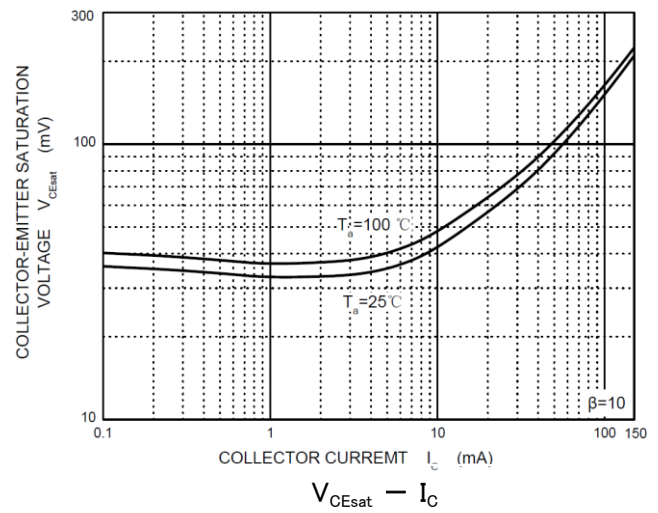
Static Characteristic



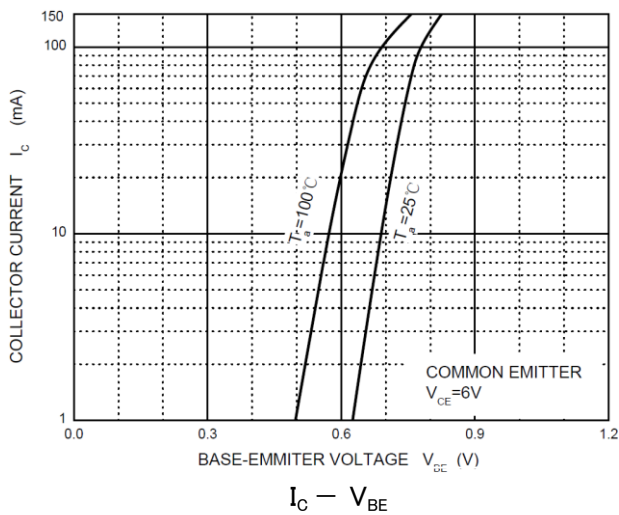
$h_{FE} - I_C$



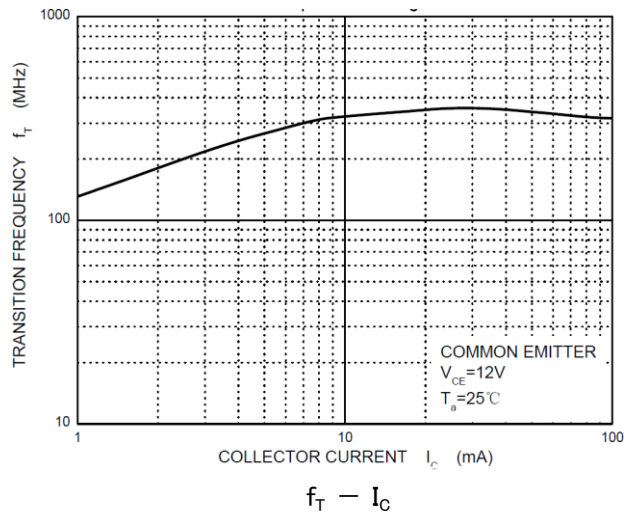
$V_{BEsat} - I_C$



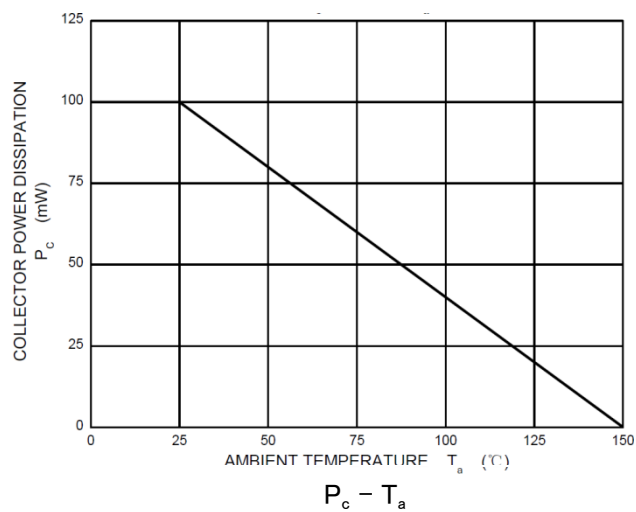
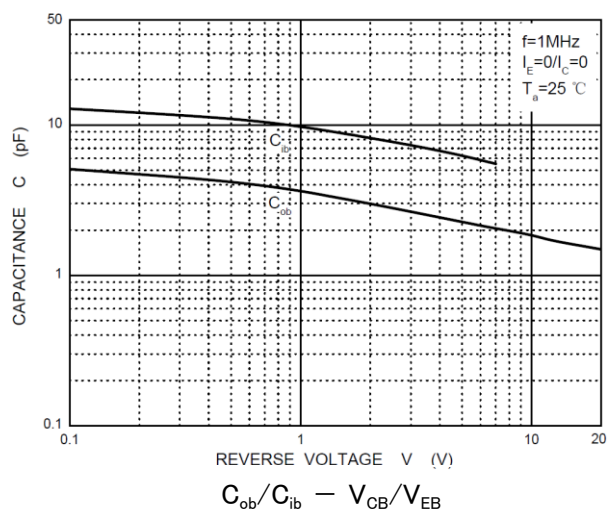
$V_{CEsat} - I_C$



$I_C - V_{BE}$



$f_T - I_C$



Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
2SC5658	SOT723	Tape & Reel 8000pcs /7" Reel	8mm	4mm	Conductive	

Package Dimensions

