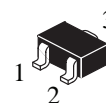


**NPN TRANSISTOR**
 **Lead(Pb)-Free**
**FEATURES:**

- High voltage and high current
- Excellent  $h_{FE}$  linearity
- High  $h_{FE}$
- Complementary to 2SA1832


**SOT-523(SC-75)**
**MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

Parameter	Symbol	Value	Units
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current –Continuous	$I_C$	150	mA
Collector Dissipation	$P_C$	100	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55-125	$^\circ\text{C}$

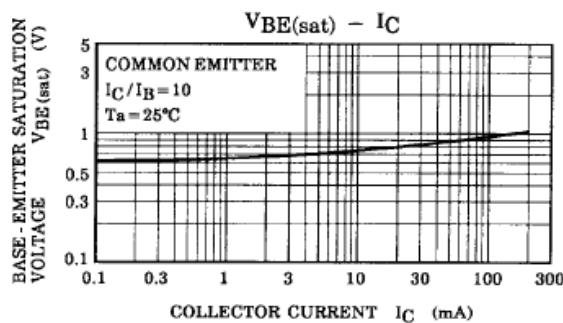
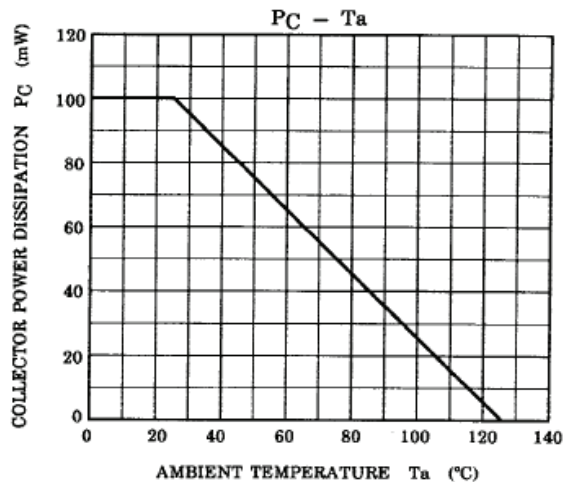
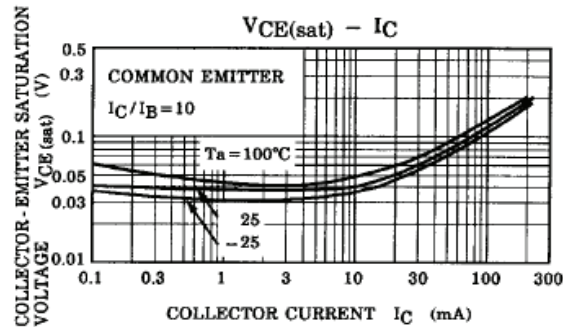
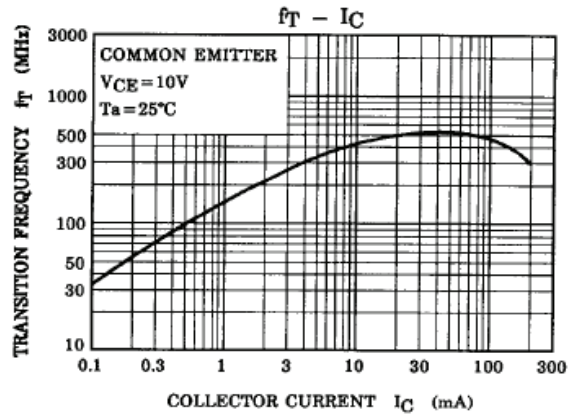
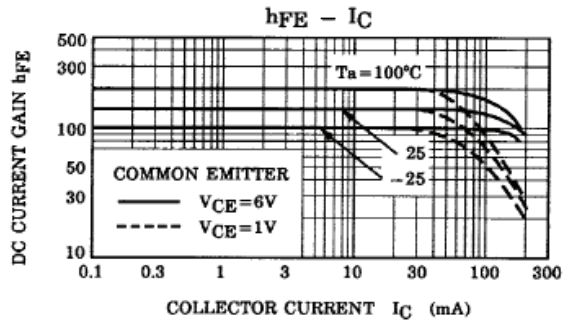
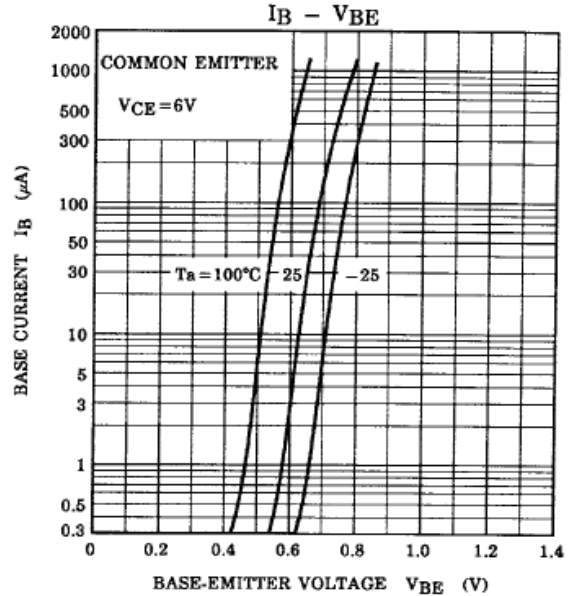
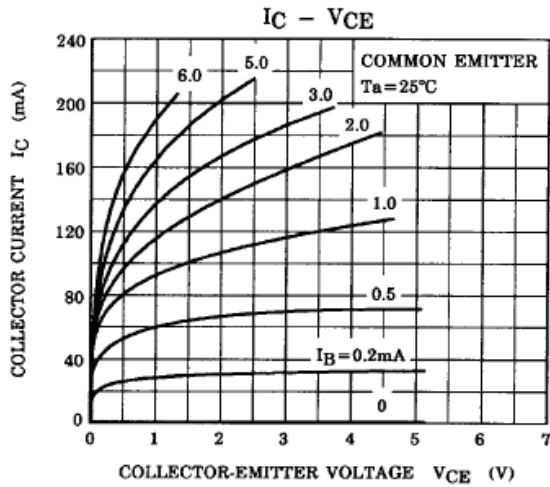
**ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage $I_C=100\mu\text{A}, I_E=0$	$V_{(BR)CBO}$	60	-	-	V
Collector-emitter breakdown voltage $I_C=1\text{mA}, I_B=0$	$V_{(BR)CEO}$	50	-	-	V
Emitter-base breakdown voltage $I_E=100\mu\text{A}, I_C=0$	$V_{(BR)EBO}$	5	-	-	V
Collector cut-off current $V_{CB}=60\text{V}, I_E=0$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter cut-off current $V_{EB}=5\text{V}, I_C=0$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
DC current gain $V_{CE}=6\text{V}, I_C=2\text{mA}$	$h_{FE}$	120	-	700	-
Collector-emitter saturation voltage $I_C=100\text{mA}, I_B=10\text{mA}$	$V_{CE(sat)}$	-	-	0.25	V
Transition frequency $V_{CE}=10\text{V}, I_C=1\text{mA}$	$f_T$	80	-	-	MHz
Collector output capacitance $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	$C_{ob}$	-	-	3.5	pF

**CLASSIFICATION OF  $h_{FE}$** 

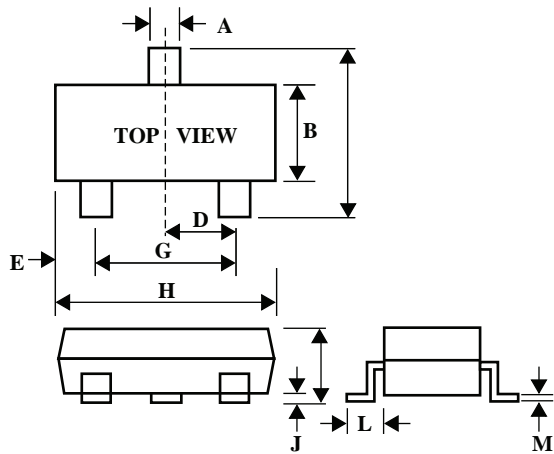
Rank	Y	GR	BL
Range	120-240	200-400	350-700
Marking	LY	LG	LL

## Typical Characteristics



**SOT-523 Outline Dimensions (SC-75)**

Unit:mm



<b>SOT-523</b>		
<b>Dim</b>	<b>Min</b>	<b>Max</b>
<b>A</b>	0.30	0.50
<b>B</b>	0.70	0.90
<b>C</b>	1.45	1.75
<b>D</b>	-	0.50
<b>E</b>	0.15	0.40
<b>G</b>	0.80	1.00
<b>H</b>	1.40	1.80
<b>J</b>	0.00	0.10
<b>K</b>	0.70	1.00
<b>L</b>	0.37	0.48
<b>M</b>	0.10	0.25