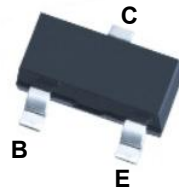
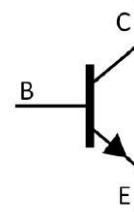


**Features**

- High collector current
- General purpose amplifier and switch
- Complementary pair with GS8550M



**SOT-23**



**Schematic Diagram**

**Absolute Maximum Ratings**

( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{\text{CBO}}$	40	V
Collector to Emitter Voltage	$V_{\text{CEO}}$	25	V
Emitter to Base Voltage	$V_{\text{EBO}}$	6	V
Collector Current - Continuous	$I_{\text{C}}$	1.5	A
Collector Power Dissipation	$P_{\text{C}}$	625	mW
Junction Temperature	$T_{\text{J}}$	150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{\text{STG}}$	-55 to +150	$^{\circ}\text{C}$

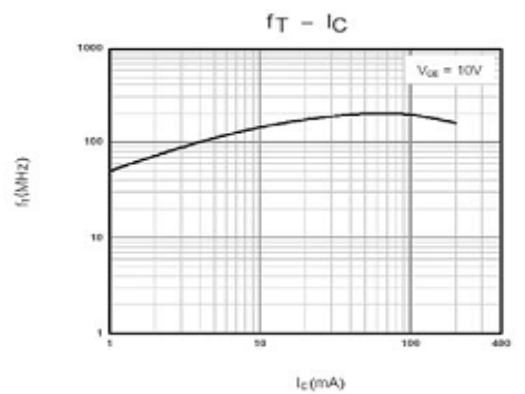
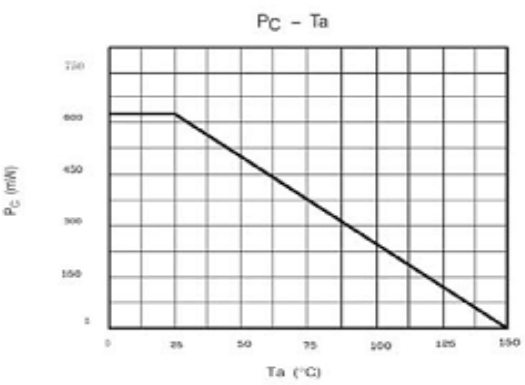
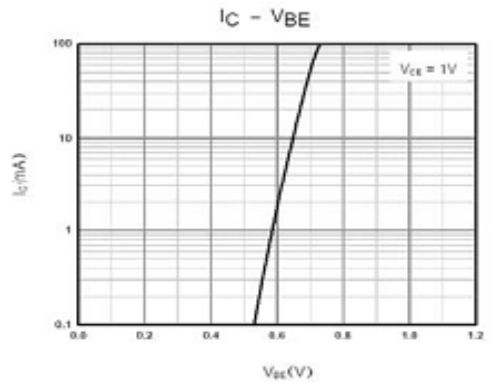
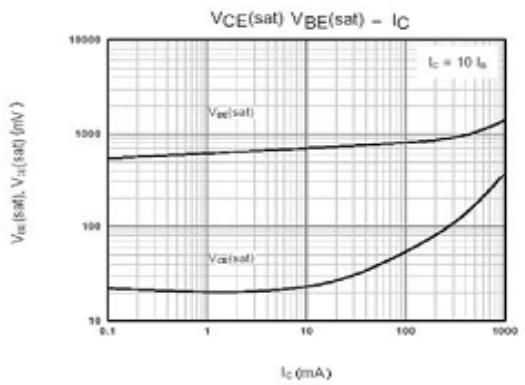
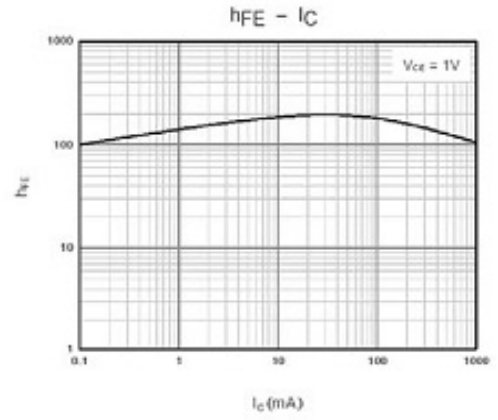
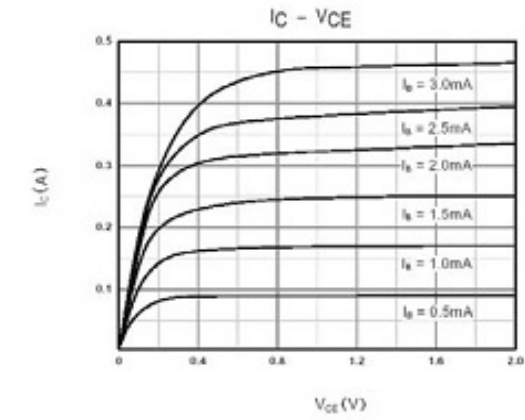
**$h_{\text{FE}}$  Classifications and Marking**

$h_{\text{FE}}$ Classifications Symbol	B	C	D
$h_{\text{FE}}$ Range	85-160	120-200	160-300
Marking	HY1B	HY1C	HY1D

**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

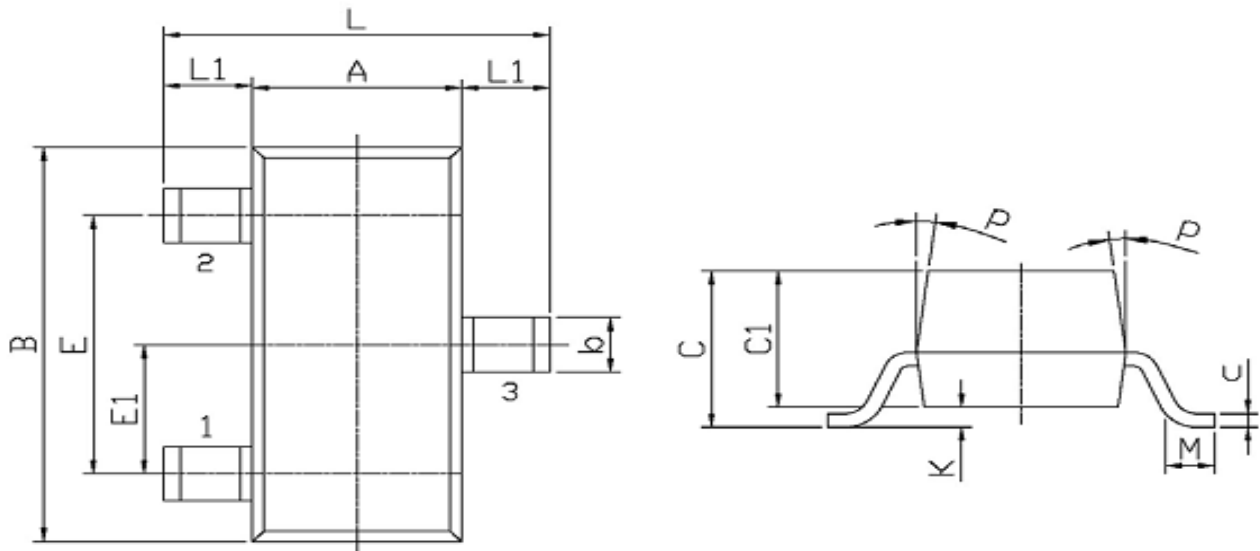
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=0.1\text{mA}$ $I_E=0$	40			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=35\text{V}$ $I_E=0$			0.1	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=6.0\text{V}$ $I_C=0$			0.1	$\mu\text{A}$
DC Current Gain <sub>(1)</sub>	$h_{FE(1)}$	$V_{CE}=1.0\text{V}$ $I_C=100\text{mA}$	85		300	
DC Current Gain <sub>(2)</sub>	$h_{FE(2)}$	$V_{CE}=1.0\text{V}$ $I_C=800\text{mA}$	40			
DC Current Gain <sub>(3)</sub>	$h_{FE(3)}$	$V_{CE}=1.0\text{V}$ $I_C=5.0\text{mA}$	45			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=800\text{mA}$ $I_B=80\text{mA}$		0.28	0.5	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=1.0\text{V}$ $I_C=10\text{mA}$		0.66	1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=800\text{mA}$ $I_B=80\text{mA}$		0.98	1.2	V
Transition Frequency	$f_T$	$I_C=50\text{mA}$ $V_{CE}=10\text{V}$	100	190		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		9.0		pF

**Ratings and Characteristic Curves**



**Package Outline Dimensions**

**SOT-23**



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7	
b	0.35	0.55			