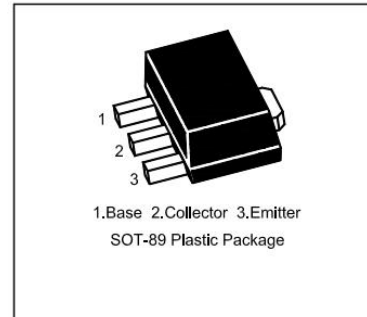


Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

FEATURES

- Small Flat Package
- Large Current Capacity



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_{c}	Collector Current	800	mA
P_{c}	Collector Power Dissipation	500	mW
$R_{\theta\text{JA}}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C}/\text{W}$
T_{j}	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

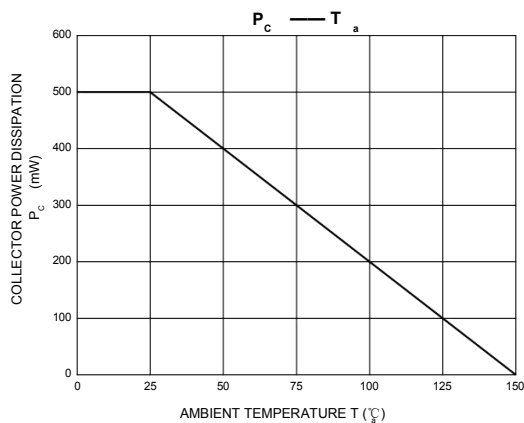
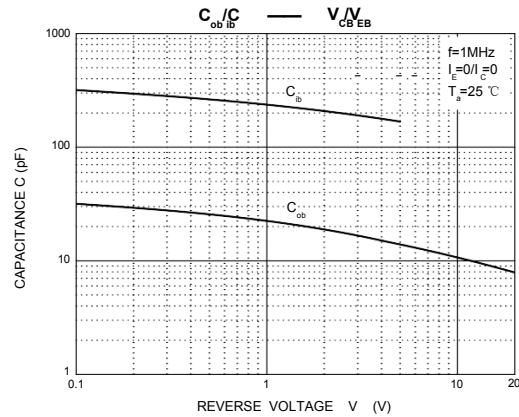
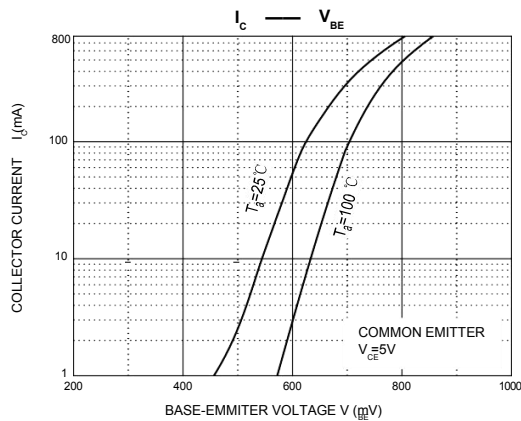
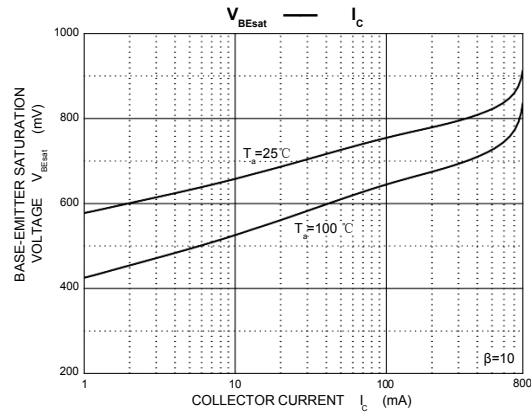
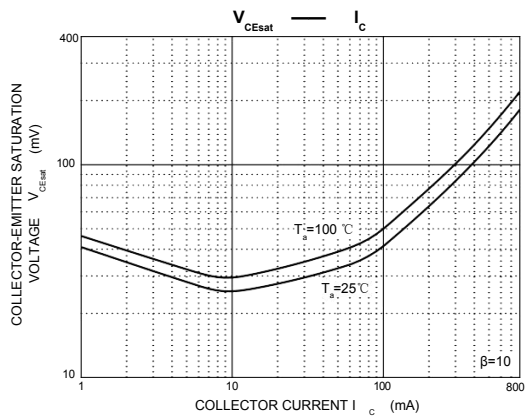
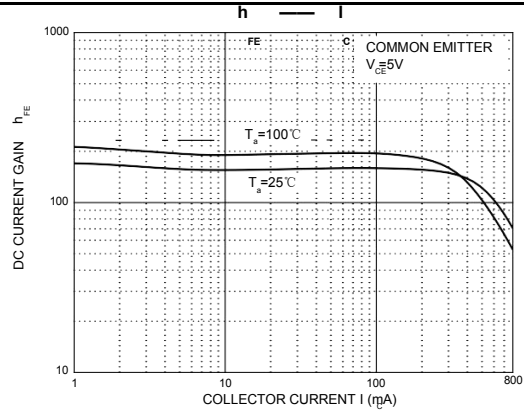
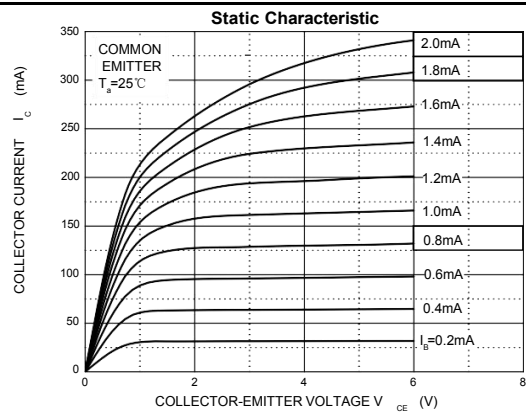
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	$I_{\text{c}}=1\text{mA}, I_{\text{E}}=0$	120			V
Collector-emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	$I_{\text{c}}=10\text{mA}, I_{\text{B}}=0$	120			V
Emitter-base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	$I_{\text{E}}=1\text{mA}, I_{\text{c}}=0$	5			V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=120\text{V}, I_{\text{E}}=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=5\text{V}, I_{\text{c}}=0$			0.1	μA
DC current gain	h_{FE}	$V_{\text{CE}}=5\text{V}, I_{\text{c}}=100\text{mA}$	80		240	
Collector-emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	$I_{\text{c}}=500\text{mA}, I_{\text{B}}=50\text{mA}$			1	V
Base-emitter voltage	V_{BE}	$V_{\text{CE}}=5\text{V}, I_{\text{c}}=500\text{mA}$			1	V
Transition frequency	f_{T}	$V_{\text{CE}}=5\text{V}, I_{\text{c}}=500\text{mA}$		120		MHz
Collector output capacitance	C_{ob}	$V_{\text{CB}}=10\text{V}, I_{\text{E}}=0, f=1\text{MHz}$			30	pF

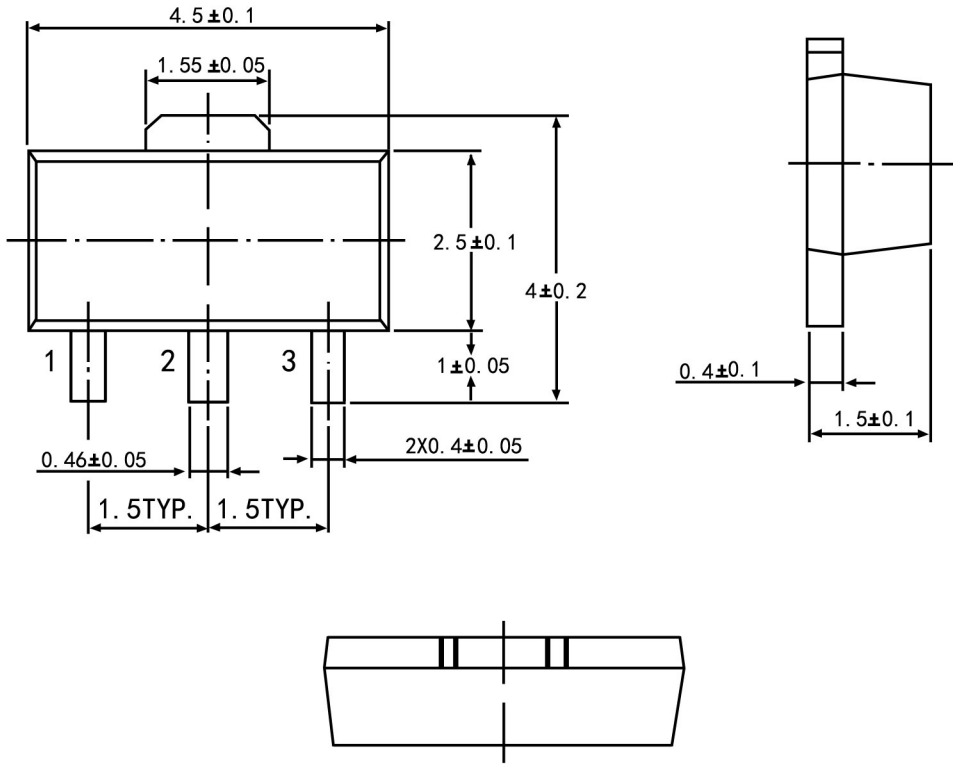
CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	80 - 160	120 - 240
MARKING	CO	CY

Typical Characteristics



SOT-89 PACKAGE OUTLINE



Symbol	Dimension in Millimeters	
	Min	Max
A	1.40	1.60
B	0.44	0.62
B1	0.35	0.54
C	0.35	0.44
D	4.40	4.60
D1	1.62	1.83
E	2.29	2.60
e	1.50 Typ	
H	3.94	4.25
H1	2.63	2.93
L	0.89	1.20
All Dimensions In mm		