

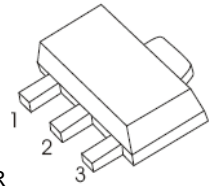


TRANSISTOR (NPN)

#### FEATURES

- Low Saturation Voltage
- Excellent  $h_{FE}$  Characteristics
- Complements the 2SA1797
- **Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"

#### SOT-89



- 1. BASE
- 2. COLLECTOR
- 3. EMITTER

#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ 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	6	V
$I_C$	Collector Current	2	A
$P_C$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	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	$V_{(BR)CBO}$	$I_C=50\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$			0.35	V
Transition frequency	$f_T$	$V_{CE}=2\text{V}, I_C=0.5\text{A}, f=100\text{MHz}$		210		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		25		pF

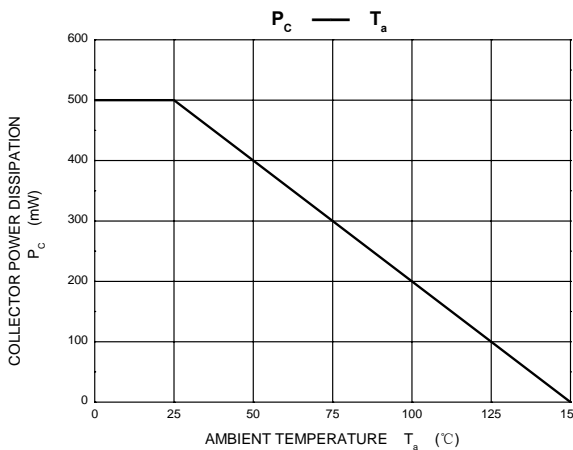
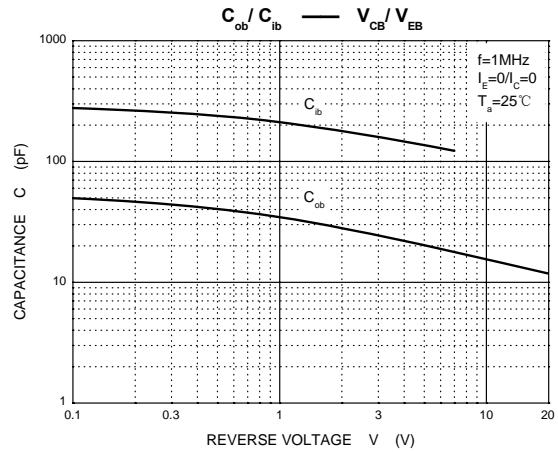
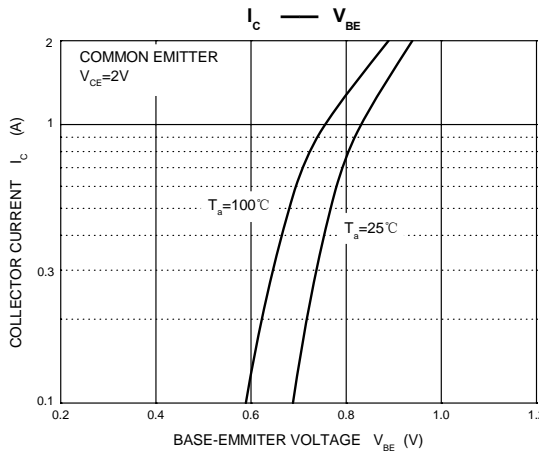
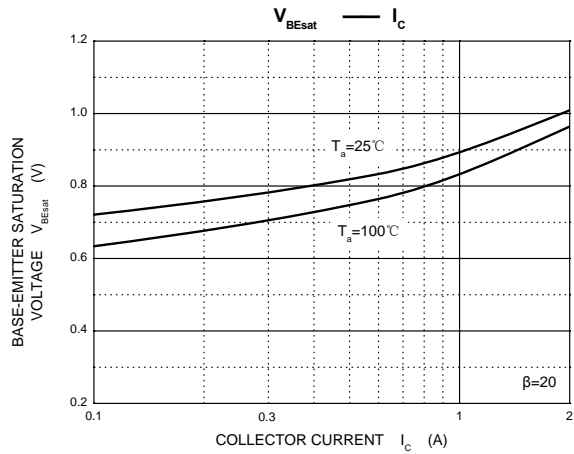
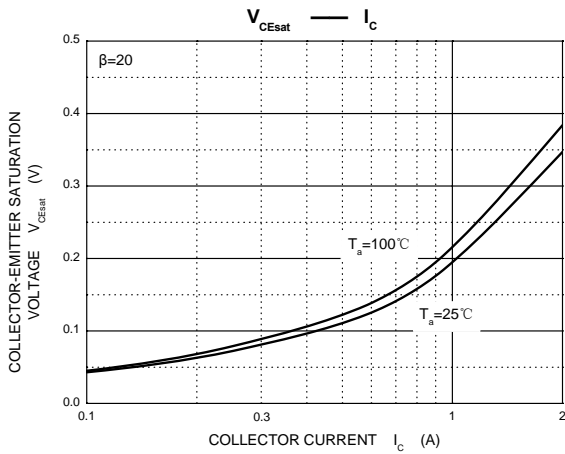
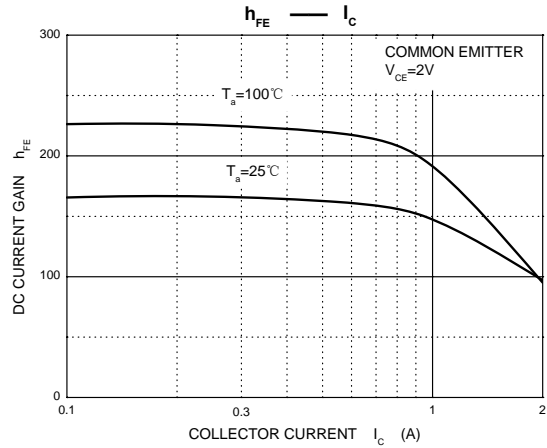
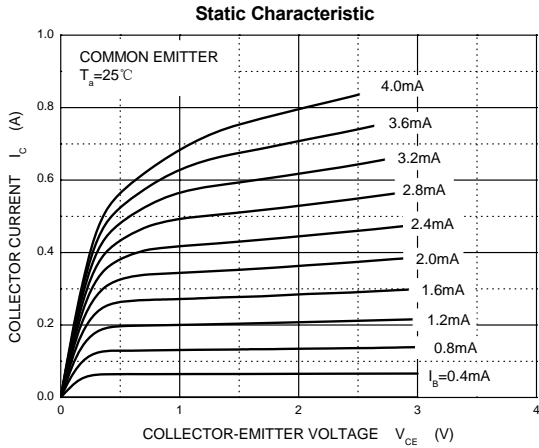
#### CLASSIFICATION OF $h_{FE}$

RANK	P	Q	R
RANGE	82 - 180	120 - 270	180 - 390
MARKING	DKP	DKQ	DKR



### SOT-89 Plastic-Encapsulate Transistors

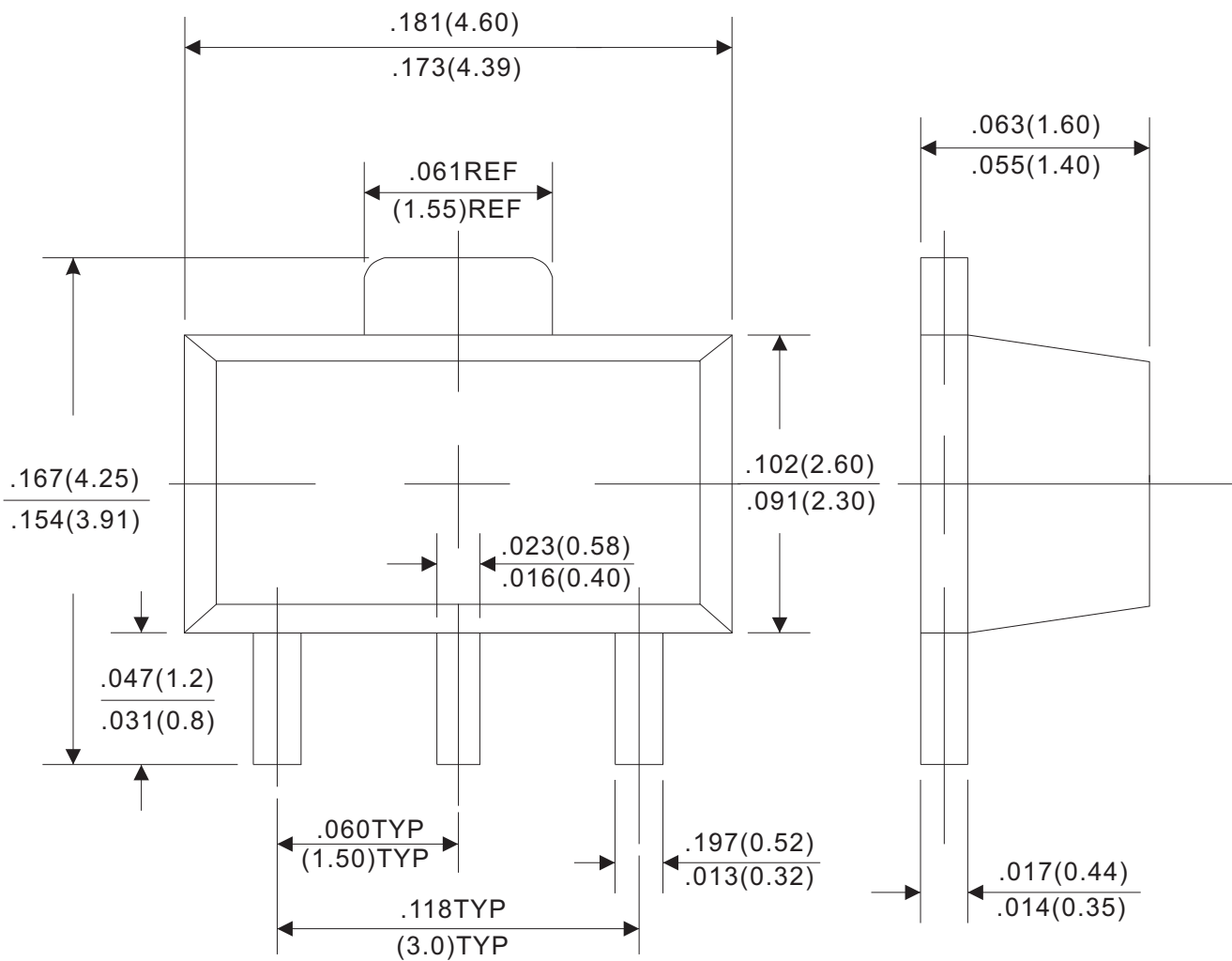
### Typical Characteristics





# Outline Drawing

# SOT-89



Dimensions in inches and (millimeters)

Rev.C