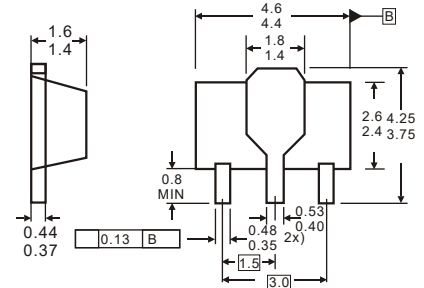


1. BASE
2. COLLECTOR
3. EMITTER

SOT-89



Dimensions in inches and (millimeters)

Features

- ✧ High breakdown voltage
- ✧ Excellent h_{FE} linearity

Marking: AK

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-400	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-200	mA
P_C	Collector Dissipation	500	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

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

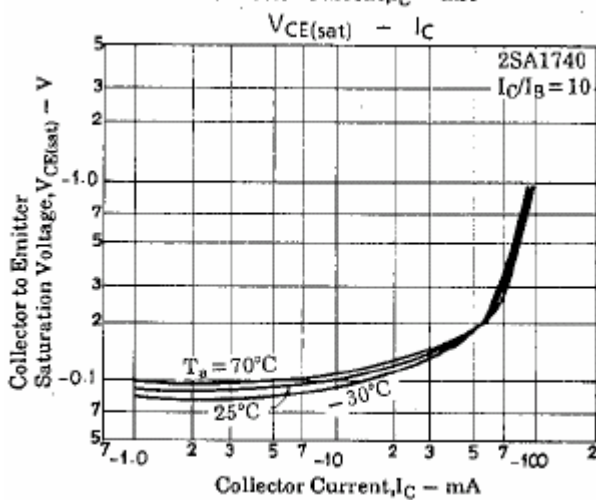
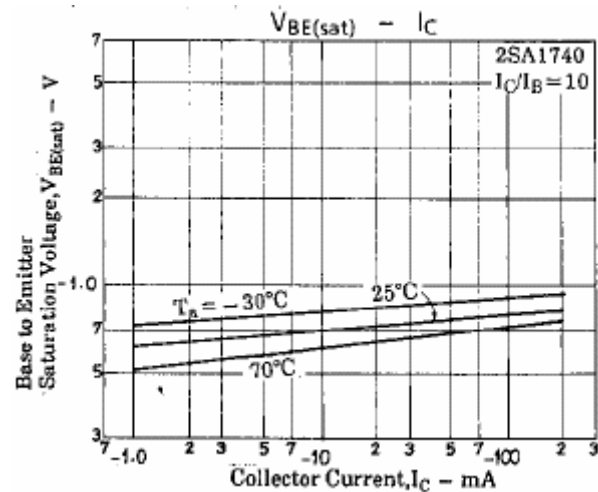
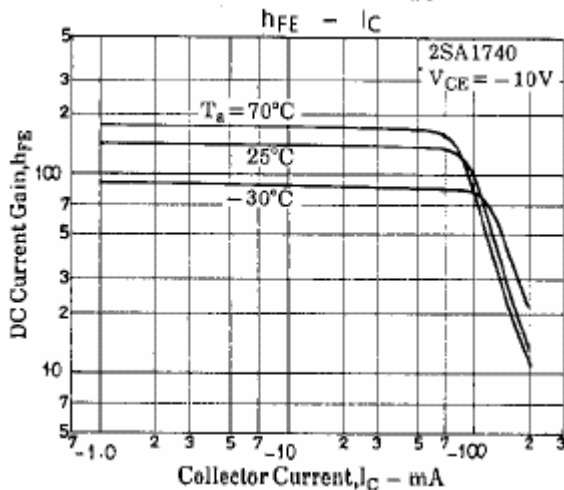
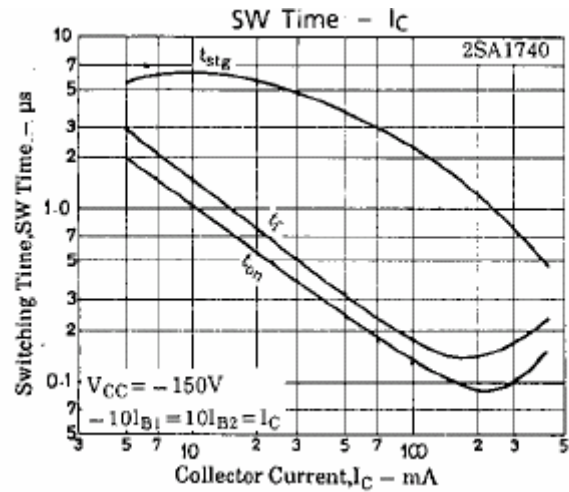
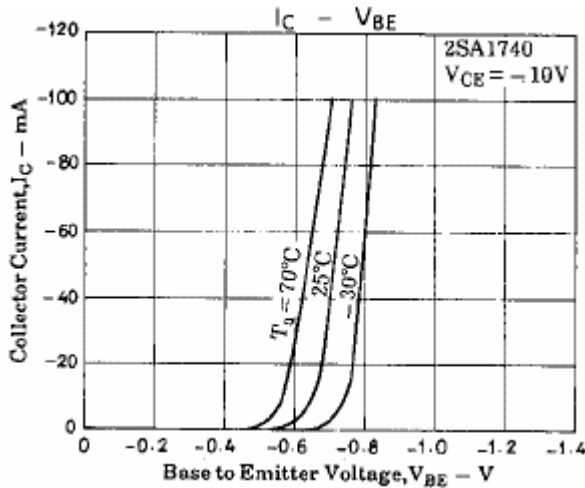
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-300\text{V}, I_E=0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-100	nA
DC current gain	h_{FE}	$V_{CE}=-10\text{V}, I_C=-50\text{mA}$	60		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-30\text{V}, I_C=-10\text{mA}$		70		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-30\text{V}, I_E=0, f=1\text{MHz}$		5		pF
Turn-ON Time	t_{on}	$V_{CC}=-150\text{V}, I_C=-50\text{mA}, I_{B1}=-I_{B2}=-5\text{mA}$		0.25		μs
Turn-OFF Time	t_{off}			5		μs

CLASSIFICATION OF h_{FE}

Rank	D	E
Range	60-120	100-200



Typical Characteristics



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -89	1000pcs	7inch	10,000pcs	203×203×195	40,000pcs	438×438×220