



1. EMITTER
2. COLLECTOR
3. BASE

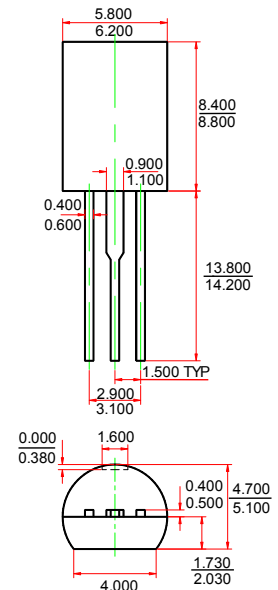
## Features

- ✧ Low Collector Saturation Voltage:  $V_{CE(sat)} = -0.5V(\text{Max.})(I_C = -1A)$
- ✧ High Speed Switching time:  $t_{stg} = 1.0 \mu S(\text{Typ.})$ .
- ✧ Complementary to KTC3209.

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-2	A
$P_C$	Collector Power Dissipation	1	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

## TO-92MOD



Dimensions in inches and (millimeters)

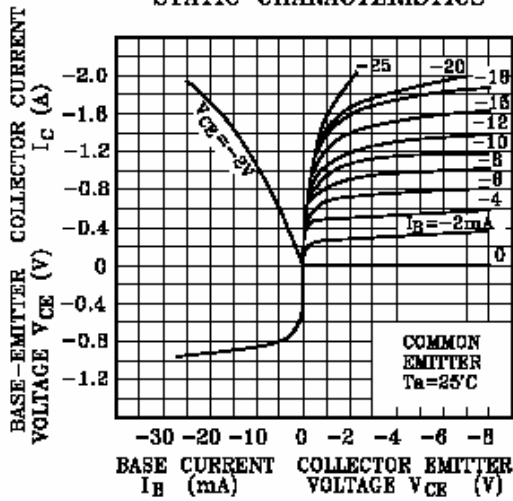
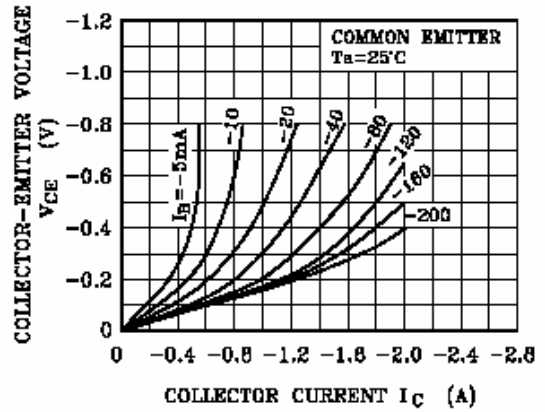
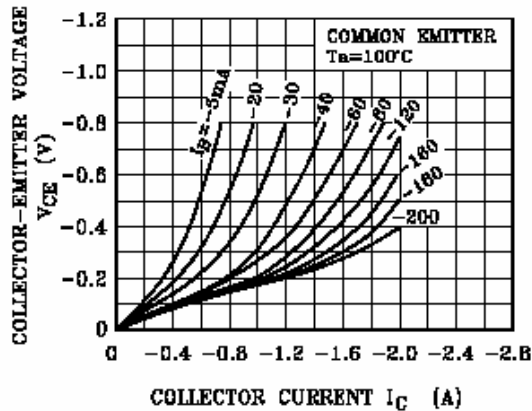
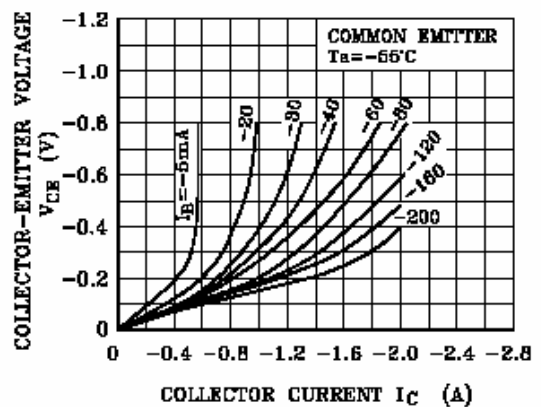
## ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100 \mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100 \mu A, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50 V, I_E = 0$			-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -0.5A$	70		240	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1.5A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1A, I_B = -0.05A$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1A, I_B = -0.05A$			-1.2	V
Transition frequency	$f_T$	$V_{CE} = -2V, I_C = -0.5A$		100		MHz
Out capacitance	$C_{ob}$	$V_{CB} = -10 V, I_E = 0, f = 1MHz$		40		pF
Turn-on time	$t_{on}$	$V_{CC} = -30V, I_{B1} = -I_{B2} = -0.05A, I_C = -1A$		0.1		us
Storage time	$t_s$			1		us
Fall time	$t_f$			0.1		us

## CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y
Range	70-140	120 - 240

# Typical Characteristics

**STATIC CHARACTERISTICS**

 **$V_{CE} - I_C$** 

 **$V_{CE} - I_C$** 

 **$V_{CE} - I_C$** 

 **$h_{FE} - I_C$** 
