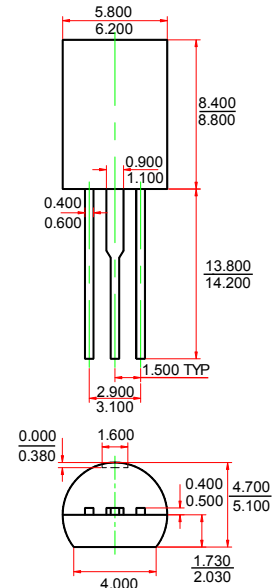




1. EMITTER
2. COLLECTOR
3. BASE

TO-92MOD



Dimensions in inches and (millimeters)

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 ($T_A = 25^\circ C$ 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	$^\circ C$
T_{stg}	Storage Temperature	-55-150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$ 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	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
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

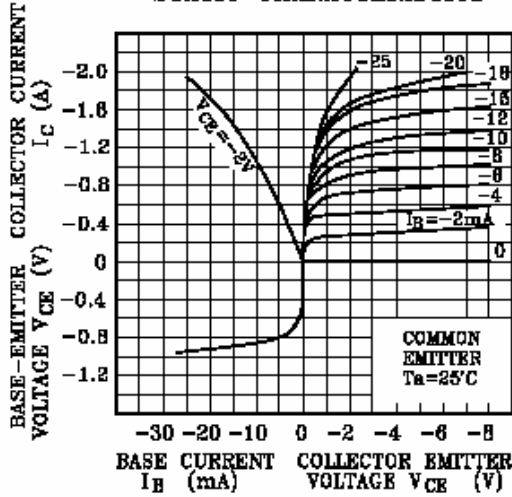
CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y
Range	70-140	120 - 240

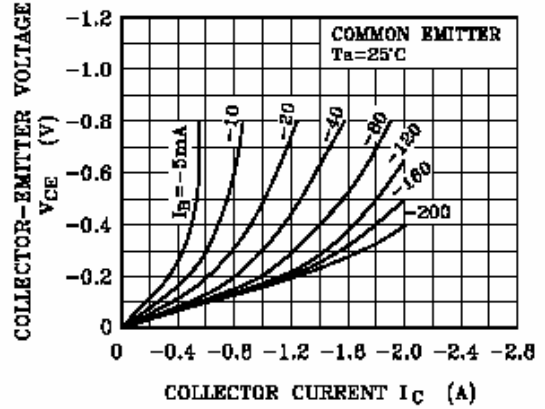


Typical Characteristics

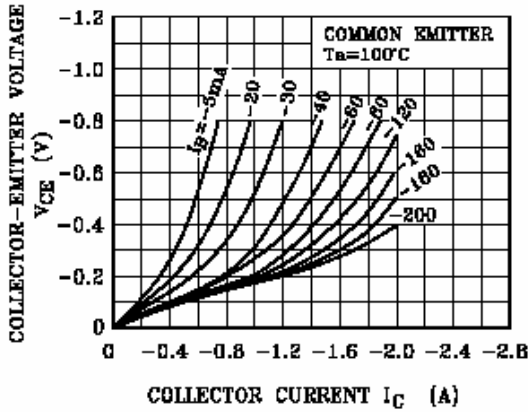
STATIC CHARACTERISTICS



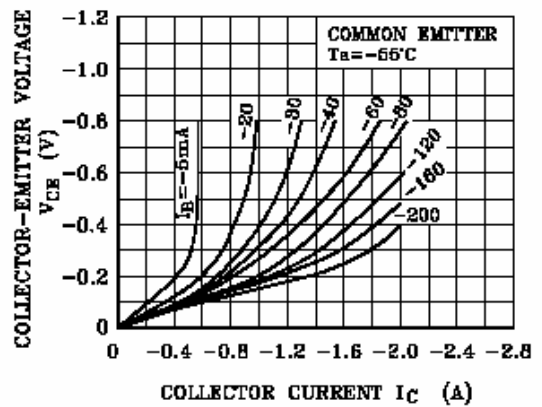
$V_{CE} - I_C$



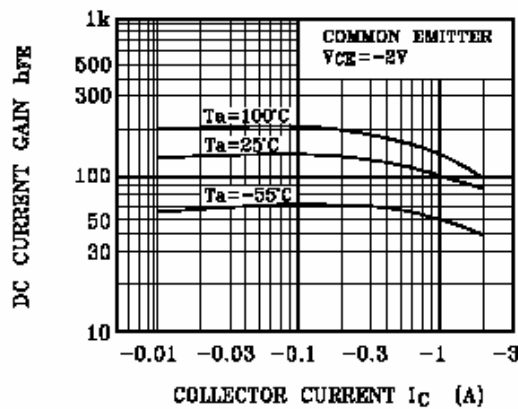
$V_{CE} - I_C$

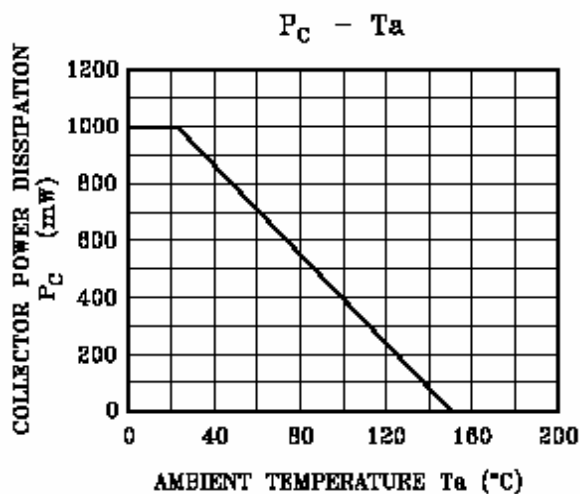
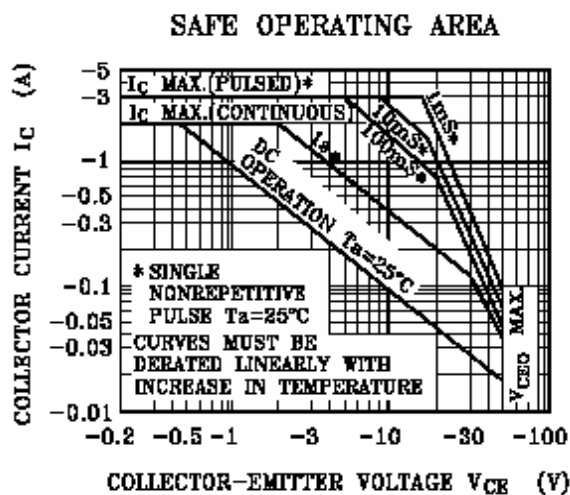
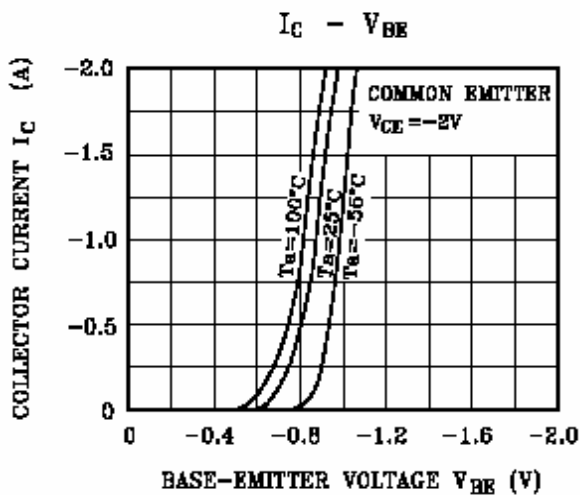
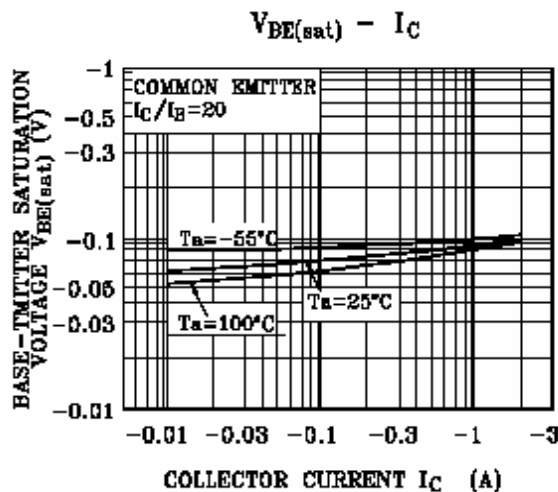
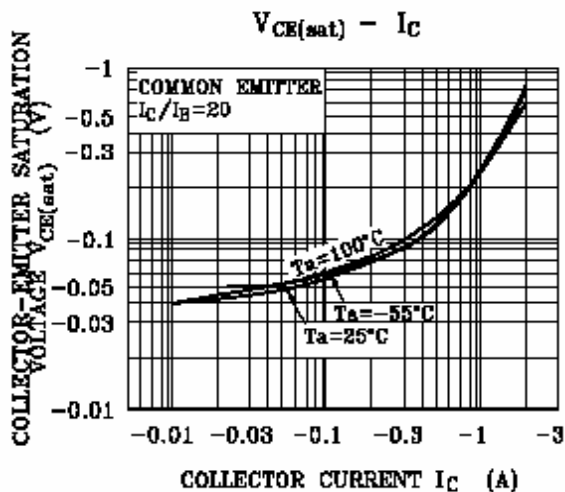


$V_{CE} - I_C$



$h_{FE} - I_C$





Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92MOD	Bulk	500pcs/BP	5000pcs	245×170×100	50,000pcs	525×375×270
TO-92MOD	Tape	2000pcs/TP	2000pcs	333×245×43	20,000pcs	502×403×300