

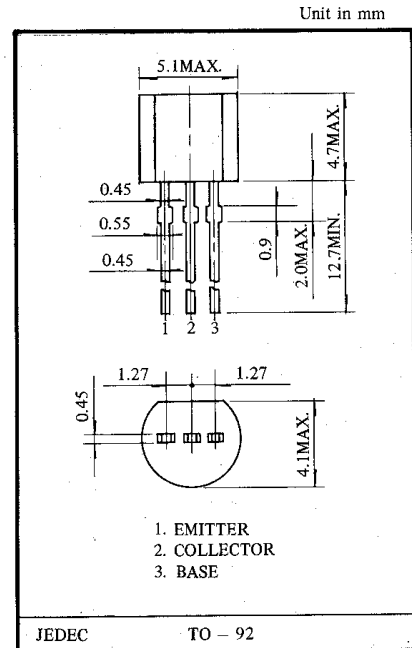
# SILICON NPN TRANSISTOR EPITAXIAL PLANAR TYPE (PCT PROCESS)

# KTC 1959

## APPLICATIONS

- Low Frequency, Low Power Amplifiers
- General-driver Stage Amplifiers
- General purpose Switching Applications

- Excellent  $h_{FE}$  vs. Collector Current Characteristics,  
 $h_{FE}(2) = 25\text{min. at } V_{CE}=6\text{V, } I_C=400\text{mA}$
- $I_C \text{ max.} = 500\text{mA}$
- $P_C \text{ max.} = 500\text{mW}$
- Complementary to the KTA562TM



## MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT	CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector - Base Voltage	$V_{CBO}$	35	V	Emitter Current	$I_E$	-500	mA
Collector - Emitter Voltage	$V_{CEO}$	30	V	Collector Power Dissipation	$P_C$	500	mW
Emitter - Base Voltage	$V_{EBO}$	5	V	Junction Temperature	$T_j$	150	$^\circ\text{C}$
Collector Current	$I_C$	500	mA	Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut off Current	$I_{CBO}$	$V_{CB}=35\text{V, } I_E=0$	-	-	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 (1)	$h_{FE}(1)$	$V_{CE}=1\text{V, } I_C=100\text{mA}$	70	-	400	
DC Current Gain (2)	$h_{FE}(2)$ (Pulsed)	$V_{CE}=6\text{V, } I_C=400\text{mA}$	25	-	-	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA, } I_B=10\text{mA}$	-	0.1	0.25	V
Base - Emitter Voltage	$V_{BE}$	$I_C=100\text{mA, } V_{CE}=1\text{V}$	-	0.8	1.0	V
Transition Frequency	$f_T$	$V_{CE}=6\text{V, } I_E=-20\text{mA}$	-	300	-	MHz
Output Capacitance	$C_{ob}$	$V_{CB}=6\text{V, } I_E=0, f=1\text{MHz}$	-	7	-	pF

■ NOTE: According to  $h_{FE}(1)$ , Classified as follows.

0	70-140	Y	120~240	GR	200~400