KTC2240

SILICON NPN TRANSISTOR
EPITAXIAL PLANAR TYPE (PCT PROCESS)

APPLICATIONS

- Low Noise Audio Amplifier Applications.

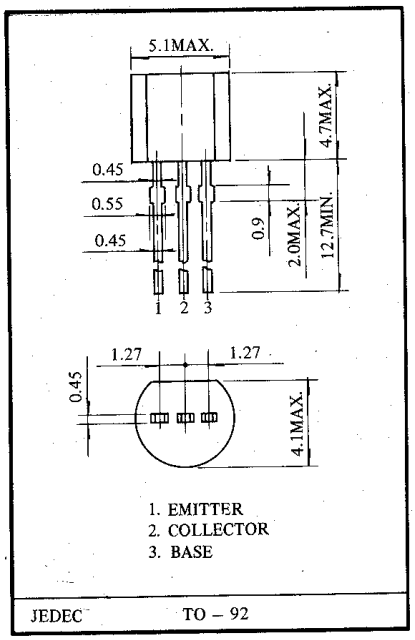
FEATURES

The KTC2240 is a transistor for low frequency and low noise applications. This device is designed to lower noise figure in the region of low signal source impedance, and to lower the pulse noise.

This is recommended for the first stages of EQ amplifiers.

- Low Noise
  : NF=4dB(Typ.), R_g=100Ω, V_{CE}=6V, I_C=100μA, f=1KHz
  : NF=0.5dB(Typ.), R_g=1KΩ, V_{CE}=6V, I_C=100μA, f=1KHz
- Low Pulse Noise : Low 1/f Noise
- High DC Current Gain : h_{FE}=200~700
- High Breakdown Voltage : V_{CEO}=120V

Unit in mm



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA

CHARACTERISTIC	SYMBOL	RATING	UNIT
Emitter Current	I_E	−100	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	125	℃
Storage Temperature Range	Tstg	-55~125	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=120V, I_E=0	—	—	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	—	—	100	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	120	—	—	V
DC Current Gain	h_{FE}(Note)	V_{CE}=6V, I_C=2mA	200	—	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA	—	—	0.3	V
Base-Emitter Voltage	V_{BE}	V_{CE}=6V, I_C=2mA	—	0.65	—	V
Transition Frequency	f_T	V_{CE}=6V, I_C=1mA	—	100	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	—	3.0	—	pF
Noise Figure	NF	V_{CE}=6V, I_C=100μA, f=10Hz, Rg=10kΩ	—	—	6	dB
		V_{CE}=6V, I_C=100μA f=1kHz, Rg=10KΩ	—	—	2	
		V_{CE}=6V, I_C=100μA f=1kHz, Rg=100Ω	—	4	—	

NOTE: According to h_{FE}, Classified as follows.

GR	200−400	BL	350−700