

TOSHIBA TRANSISTOR SILOCON NPN EPITAXIAL TYPE (PCT PROCESS)

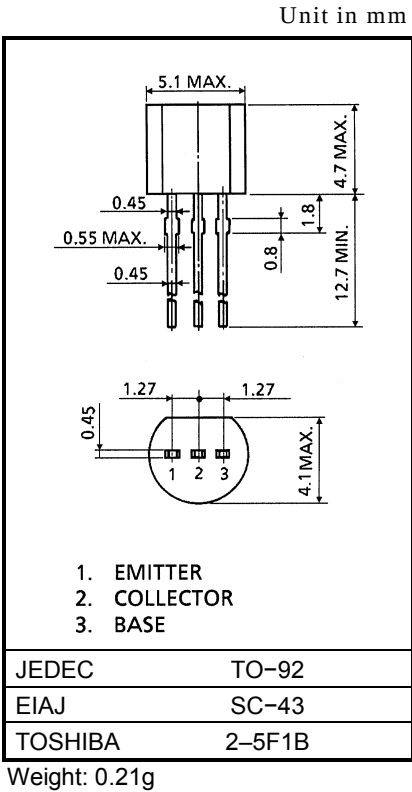
2SC732TM

LOW NOISE AUDIO AMPLIFIER APPLICATIONS

- High Breakdown Voltage : $V_{CEO} = 50V$
- Excellent h_{FE} Linearity
: $h_{FE} (I_C = 0.1mA) / h_{FE} (I_C = 2mA) = 0.95$ (Typ.)
- Low Noise
: $NF (1) = 0.5dB$ (Typ.) ($f = 100Hz$)
: $NF (2) = 0.2dB$ (Typ.) ($f = 1kHz$)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 60V, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	0.1	μA
DC Current Gain	h_{FE} (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	$V_{CE} = 6V, I_C = 1mA$	—	150	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	2.0	—	pF
Noise Figure	NF (1)	$V_{CE} = 6V, I_C = 0.1mA, f = 100Hz, R_G = 10k\Omega$	—	0.5	6	V
Noise Figure	NF (2)	$V_{CE} = 6V, I_C = 0.1mA, f = 1kHz, R_G = 10k\Omega$	—	0.2	3	V

Note: h_{FE} Classification GR: 200~400, BL: 350~600

