

2SA1015

Transistor

Unit in mm

Silicon PNP Epitaxial Type (PCT Process)

Audio Frequency General Purpose

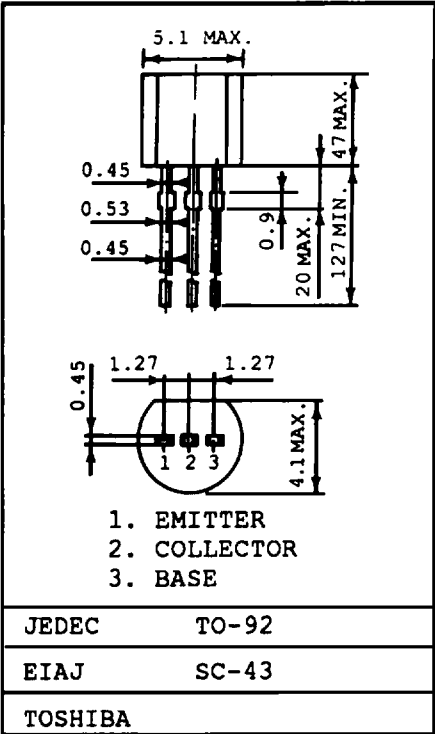
Amplifier Applications

Features

- High Voltage and High Current.
 - $V_{CE0} = -50V$ (Min.), $I_C = 150mA$ (Max.)
- Excellent h_{FE} Linearity
 - $h_{FE} (2) = 80$ (Typ.) at $V_{CE} = -6V$, $I_C = -150mA$
 - $h_{FE} (I_C = 0.1mA)/h_{FE} (I_C = 2mA) = 0.95$ (Typ.)
- Low Noise
 - $NF = 1dB$ (Typ.) at $f = 1kHz$
- Complementary to 2SC1815

Absolute Maximum Ratings ($T_a = 25^{\circ}C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-150	mA
Base Current	I_B	-50	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	125	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55 ~ 125	$^{\circ}C$



Weight: 0.21g

Electrical Characteristics (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$	—	—	-0.1	μA
DC Current Gain	$h_{FE(1)}(\text{Note})$	$V_{CE} = -6V, I_C = -2mA$	70	—	240	
	$h_{FE(2)}$	$V_{CE} = -6V, I_C = -150mA$	25	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$	—	-0.1	-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -10mA$	—	—	-1.1	V
Transition Frequency	f_T	$V_{CE} = -10V, I_E = 1mA$	80	—	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	4	7	pF
Base Spreading	$r_{bb'}$	$V_{CB} = -10V, I_C = -1mA, f = 30MHz$	—	30	—	Ω
Noise Figure	NF	$V_{CE} = -6V, I_C = -0.1mA, R_g = 10k\Omega, f = 1kHz$	—	1.0	10	dB

*Note: h_{FE} Classification 0: 70~140, Y: 120~240

