

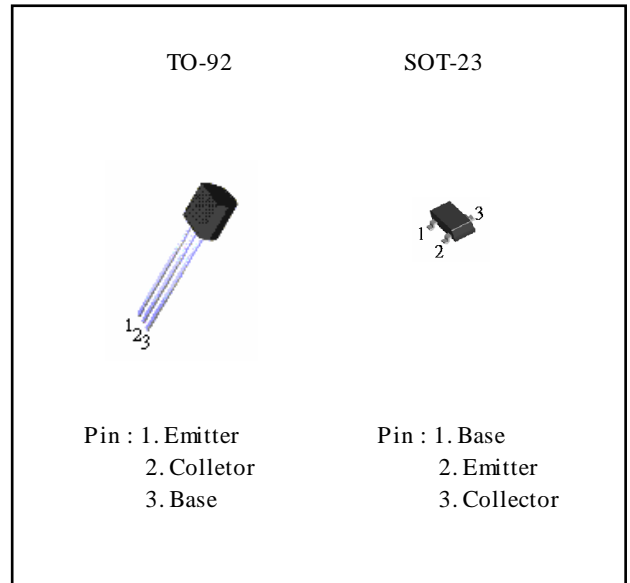
NPN Epitaxial Silicon Transistor

**AUDIO FREQUENCY AMPLIFIER
HIGH FREQUENCY OSC.**

- Complement to PJA733
- Excellent DC Current Gain Linearly 0.1mA to 50mA
- Low Output Capacitance $C_{ob}=2.5PF(Typ.) @ V_{CB} = 6V, f=1MHz$
- Low Noise Figure $NF=2.5dB(TYP.) I_C = 0.1mA, V_{CE} = 6V R_g = 2K\Omega, f=1KHz$
- DC Current Gain Selection Available

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

Rating	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	120	mA
Total Device Dissipation	P_D	450	mW
	P_D	1.2	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~150	$^\circ C$



ORDERING INFORMATION

Device	Operating Temperature	Package
PJC945CT	-20 $^\circ C$ ~ +85 $^\circ C$	TO-92
PJC945CX		SOT-23

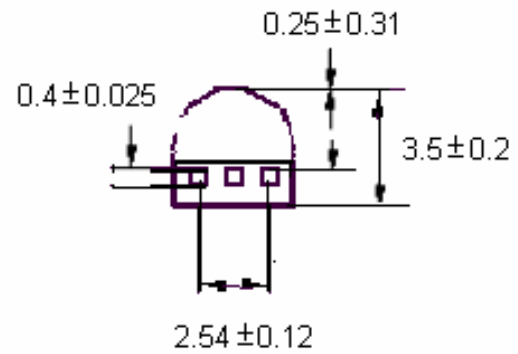
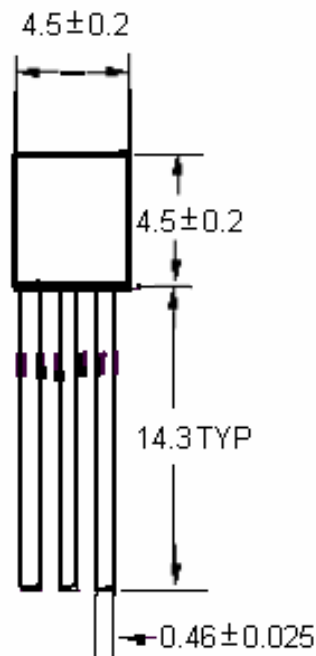
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_c = 10\mu A, I_E = 0$	80			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_c = 1.0mA, I_B = 0$	50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -10\mu A, I_C = 0$	5			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 45V, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			0.1	μA
Collector-Cutoff Current	I_{CEO}	$V_{CE} = 40V, I_B = 0$			1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 6V, I_c = 0.1 mA$	50			
	$h_{FE(2)}$	$V_{CE} = 6V, I_c = 1.0 mA$	70		70	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_c = 10mA, I_B = 1mA$		0.09	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_c = 10mA, I_B = 1mA$		0.81	1	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_c = 0.1mA, V_{CE} = 6V$	0.55	0.6	0.65	V
Current-Gain-Bandwidth Product	f_T	$V_{CE} = 6V, I_c = 10mA$	150	250	450	MHz
		$V_{CB} = 6V, I_E = 0$				
Output Capacitance	C_{ob}	$f = 1MHz$		2.5	5	pF
		$V_{CE} = 6V, I_E = -0.5mA$				
Noise Figure	NF	$f = 1KHz, R_s = 2K\Omega$		2.5	15	dB

$h_{FE(2)}$ CLASSIFICATION

Classification	R	P	Q	K
$h_{FE(2)}$	70-140	120-240	200-400	350-700

TO-92 Unit:mm



SOT-23 Unit:mm

