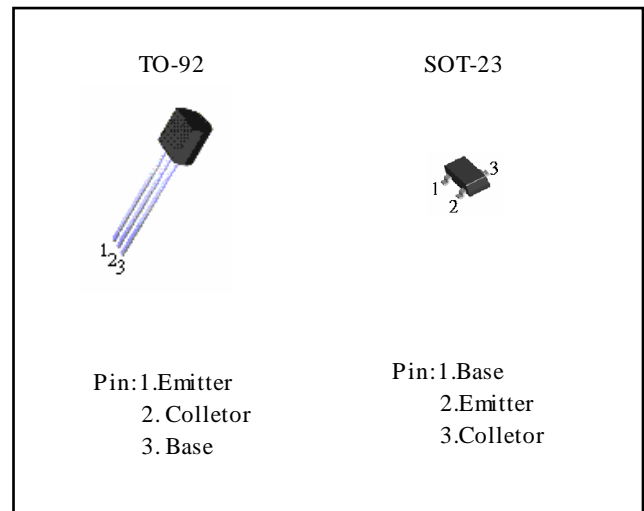


NPN Epitaxial Silicon Transistors

OUTPUT AMPLIFIER OF PORTABLE RADIO IN CLASS B PUSH-PULL OPERATION

- Complement to PJE8550
- Collector Current $I_c=1.5A$
- Collector Dissipation $P_c=2W(T_c=25^{\circ}C)$



ORDERING INFORMATION

Device	Operating Temperature	Package
PJE8050CT	-20°C ~ +85°C	TO-92
PJE8050CX		SOT-23

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Rating	Symbol	Rating	Unit
Collector-base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	0.5	A
*Collector Current (Pulse)	I_C	1	A
Collector Dissipation	P_C	0.75	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

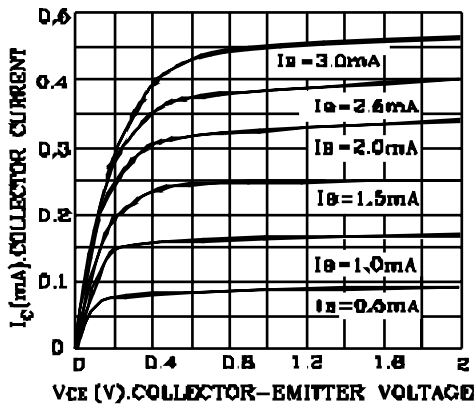
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=60V, I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=6V, I_C=0$			100	nA
*DC Current Gain	h_{FE1}	$V_{CE}=2V, I_C=50mA$	135		400	
	h_{FE2}	$V_{CE}=2V, I_C=0.5A$	81			
**Base Emitter On Voltage	$V_{BE} (on)$	$V_{CE}=2V, I_C=20mA$	600	640	700	mV
*Collector Emitter Saturation Voltage	$V_{CE} (sat)$	$I_C=400mA, I_B=40mA$		0.15	0.3	V
*Base Emitter Saturation Voltage	$V_{BE} (sat)$	$I_C=500mA, I_B=50mA$		0.9	1.2	V
Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		19		pF
Current Gain Bandwidth Product	f_T	$V_{CE}=2V, I_C=100mA$	100	160		MHz
Turn On Time	t_{on}	$V_{CC}=10V, I_C=100mA$		0.07		μs
Storage Time	t_s	$I_{B1} = -I_{B2}=10mA$		0.95		μs
Fall Time	t_f	$V_{BE}(off) = -2~-3V$		0.07		μs

$h_{FE}(1)$ CLASSIFICATION

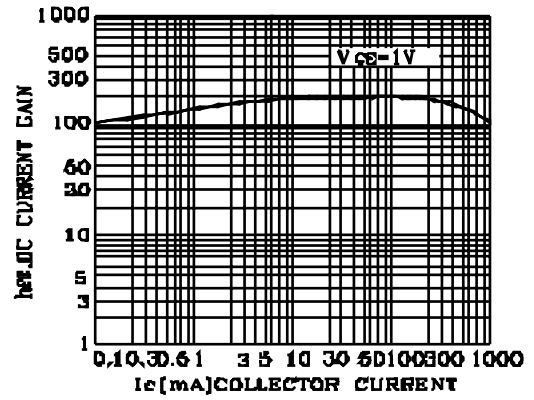
Classification	B	C	D	E
$h_{FE}(1)$	85-160	120-220	160-300	380-600

NPN Epitaxial Silicon Transistors

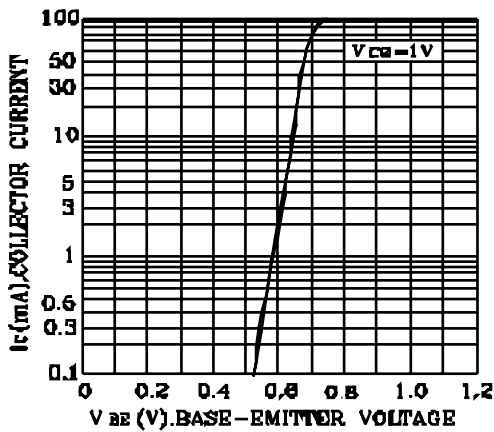
STATIC CHARACTERISTIC



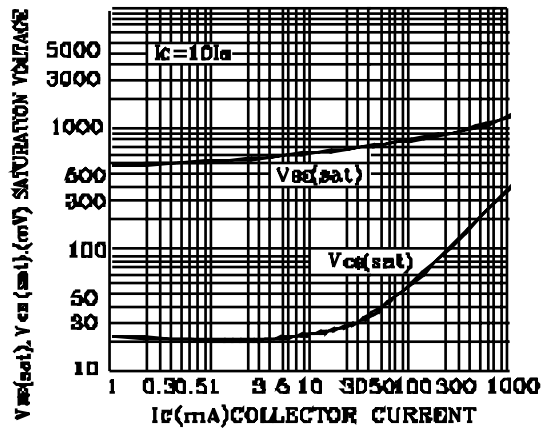
DC CURRENT GAIN



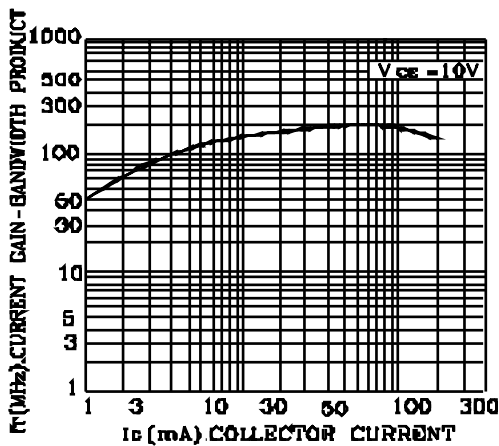
BASE-EMITTER ON VOLTAGE



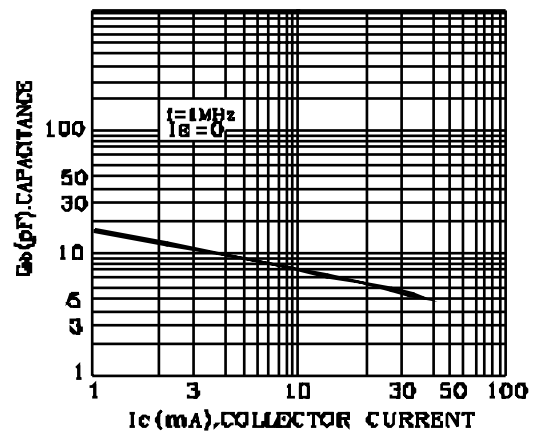
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



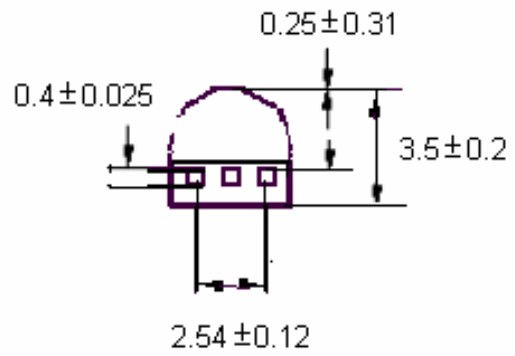
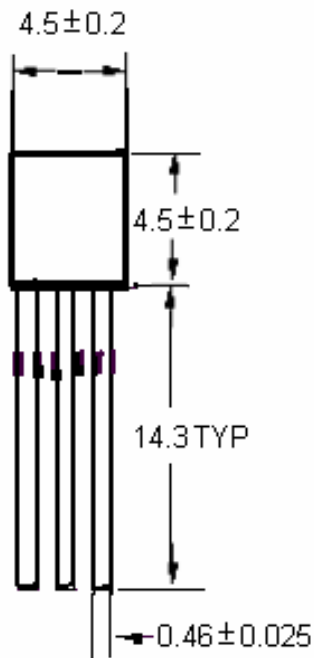
CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR OUTPUT CAPACITANCE



TO-92 Unit:mm



SOT-23 Unit:mm

