



Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

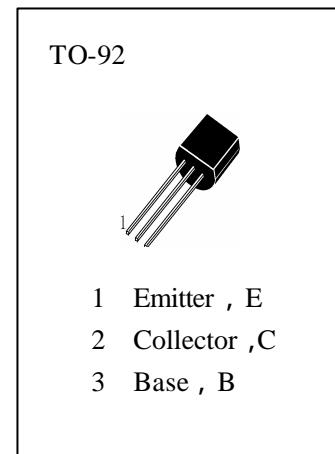
**H4204**

## APPLICATIONS

AF Amplifier , Various Drivers.

## ABSOLUTE MAXIMUM RATINGS ( $T_a=25$ )

$T_{stg}$	—Storage Temperature.....	-55~150
$T_j$	—Junction Temperature.....	150
$P_c$	—Collector Dissipation.....	600mW
$V_{CBO}$	—Collector-Base Voltage.....	30V
$V_{CEO}$	—Collector-Emitter Voltage.....	25V
$V_{EBO}$	—Emitter-Base Voltage.....	15V
$I_c$	—Collector Current.....	700mA



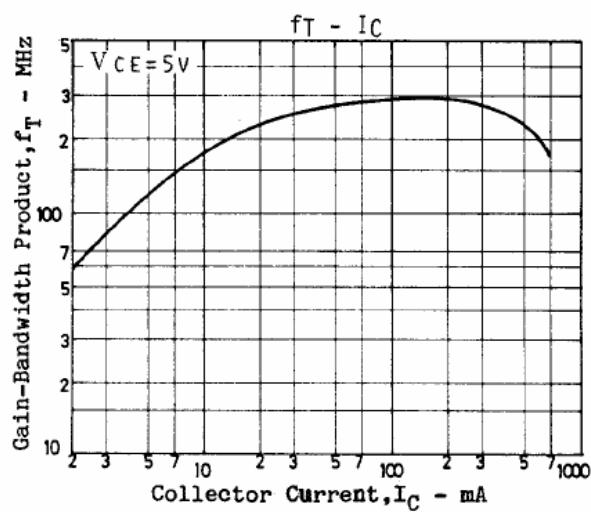
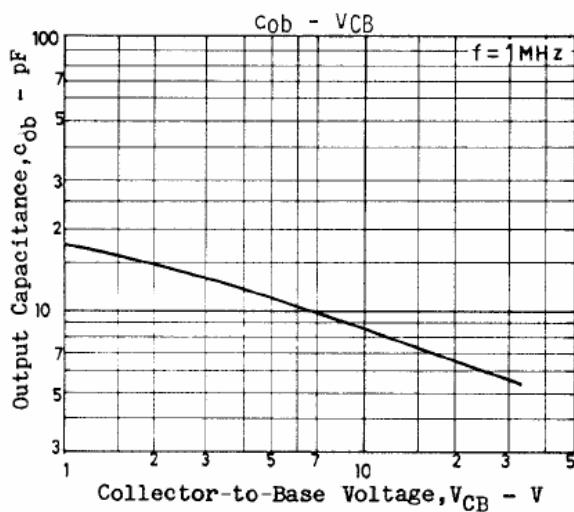
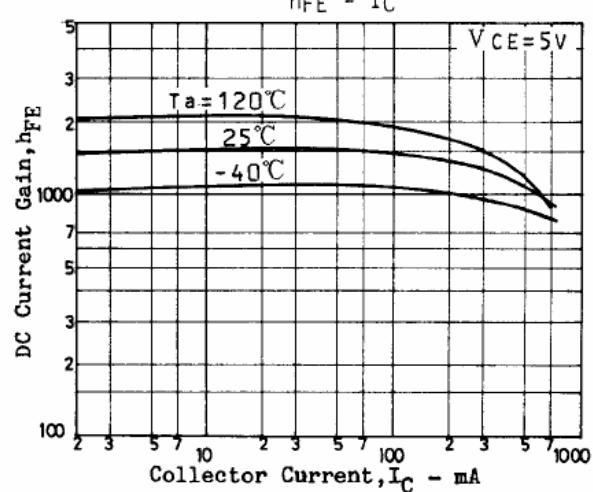
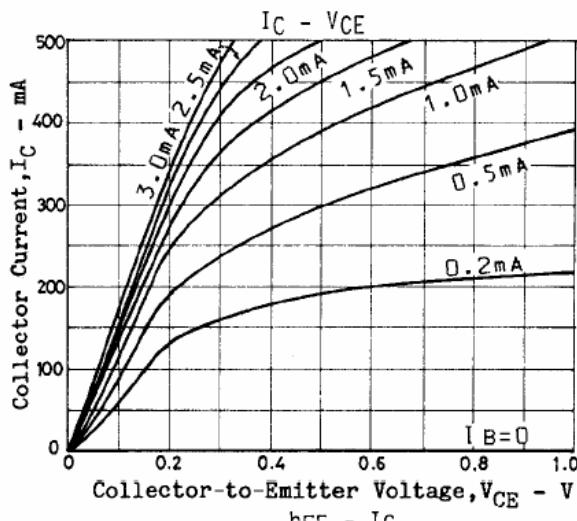
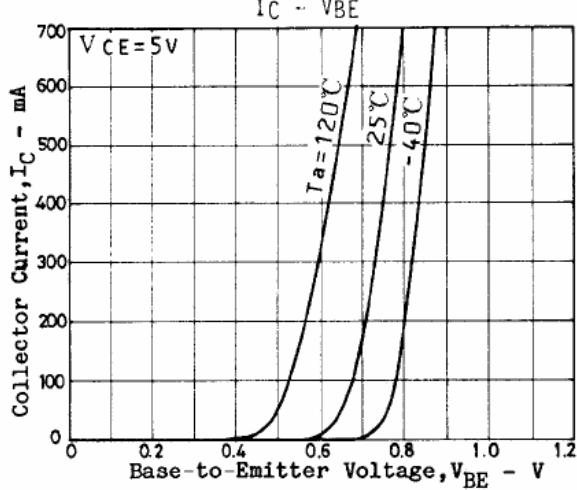
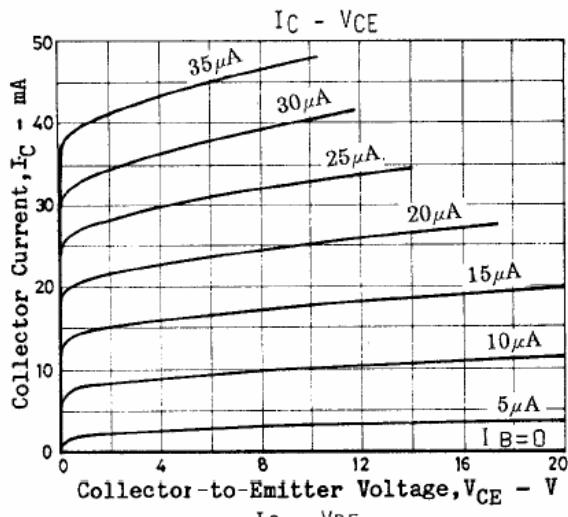
## ELECTRICAL CHARACTERISTICS ( $T_a=25$ )

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CBO}$	Collector-Base Breakdown Voltage	30			V	$I_C=10 \mu A, I_E=0$
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	25			V	$I_C=1mA, I_B=0$
$BV_{EBO}$	Emitter-Base Breakdown Voltage	15			V	$I_E=10 \mu A, I_C=0$
$H_{FE(1)}$	DC Current Gain	800	1500	3200		$V_{CE}=5V, I_C=50mA$
$H_{FE(2)}$	DC Current Gain	600				$V_{CE}=5V, I_C=500mA$
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage		0.15	0.5	V	$I_C=500mA, I_B=10mA$
$V_{BE(sat)}$	Base- Emitter Saturation Voltage		0.9	1.2	V	$I_C=500mA, I_B=10mA$
$I_{CBO}$	Collector Cut-off Current			100	nA	$V_{CB}=20V, I_E=0$
$I_{EBO}$	Emitter Cut-off Current			100	nA	$V_{EB}=10V, I_C=0$
$f_T$	Current Gain-Bandwidth Product	270			MHz	$V_{CE}=10V, I_C=50mA$ ,
$C_{ob}$	Output Capacitance	9			pF	$V_{CB}=10V, f=1MHz$
$t_{ON}$	Turn-On Time		0.1		μ S	See specified test circuit
$t_{STG}$	Storage Time		0.6		μ S	See specified test circuit
$t_F$	Fall Time		0.06		μ S	See specified test circuit



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