



Shantou Huashan Electronic Devices Co.,Ltd.

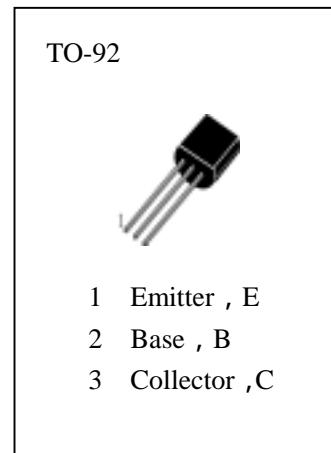
NPN SILICON TRANSISTOR

**HA42**

## HIGH VOLTAGE TRANSISTOR

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

$T_{stg}$ —Storage Temperature.....	-55~150
$T_j$ —Junction Temperature.....	150
$P_C$ —Collector Dissipation.....	625mW
$V_{CBO}$ —Collector-Base Voltage.....	300V
$V_{CEO}$ —Collector-Emitter Voltage.....	300V
$V_{EBO}$ —Emitter-Base Voltage.....	6V
$I_C$ —Collector Current.....	500mA



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

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CBO}$	Collector-Base Breakdown Voltage	300			V	$I_C=100 \mu A, I_E=0$
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	300			V	$I_C=1mA, I_B=0$
$BV_{EBO}$	Emitter-Base Breakdown Voltage	5			V	$I_E=100 \mu A, I_C=0$
$I_{CBO}$	Collector Cut-off Current			100	nA	$V_{CB}=200V, I_E=0$
$I_{EBO}$	Emitter-Base Cut-off Current			100	nA	$V_{EB}=3V, I_C=0$
$I_{CES}$	Collector Cut-off Current			1	$\mu A$	$V_{CE}=300V, V_{BE}=0$
$HFE(1)$	DC Current Gain	25				$V_{CE}=10V, I_C=1mA$
$HFE(2)$		40				$V_{CE}=10V, I_C=10mA$
$HFE(3)$		40				$V_{CE}=10V, I_C=30mA$
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage			0.5	V	$I_C=20mA, I_B=2mA$
$V_{CE(sat2)}$				1	V	$I_C=60mA, I_B=6mA$
$V_{BE(sat1)}$	Base-Emitter Saturation Voltage			0.9	V	$I_C=20mA, I_B=2mA$
$f_T$	Current Gain-Bandwidth Product	50			MHz	$V_{CE}=20V, I_C=10mA$ $F=100MHz$