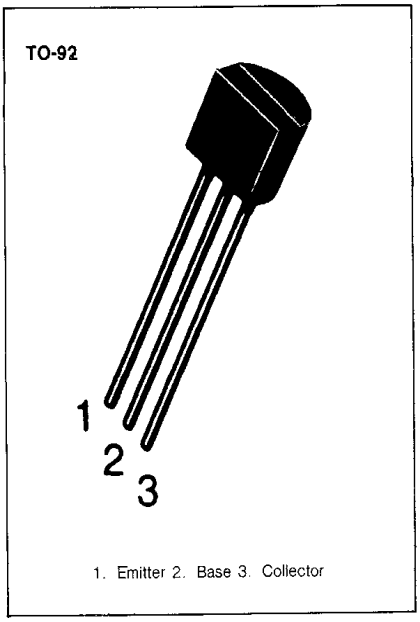
Transistors
2SA733

USHA (INDIA) LTD

LOW FREQUENCY AMPLIFIER

- **Collector-Base Voltage $V_{CBO} = -60V$**



ABSOLUTE MAXIMUM RATINGS ($T_a = 25°C$)

Characteristic	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	−150	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 ~ 150	°C

ELECTRICAL CHARACTERISTICS ($T_a = 25°C$)

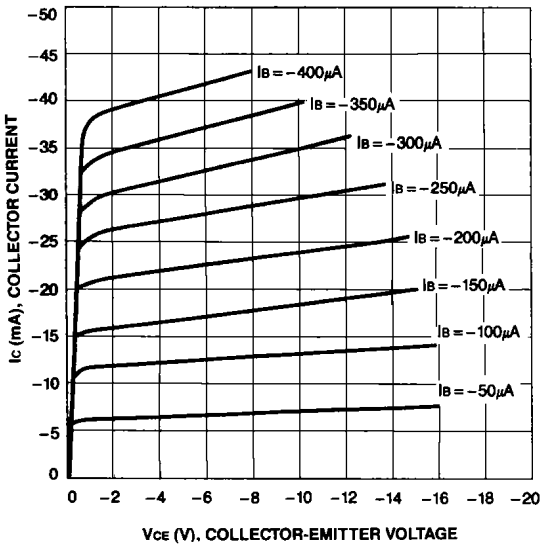
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100\mu A$, $I_E = 0$	−60			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -10mA$, $I_B = 0$	−50			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -10\mu A$, $I_C = 0$	−5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -60V$, $I_E = 0$			−0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V$, $I_C = 0$			−0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -6V$, $I_C = -1mA$	40		700	
Collector-Emitter Saturation Voltage	$V_{CE}(sat)$	$I_C = -100mA$, $I_B = -10mA$		−0.18	−0.3	V
Base-Emitter On Voltage	V_{BE} (on)	$V_{CE} = -6V$, $I_C = -1mA$	−0.50	−0.62	−0.80	V
Current-Gain-Bandwidth Product	f_T	$V_{CE} = -6V$, $I_C = -10mA$	50	180		MHz
Output Capacitance	Cob	$V_{CB} = -10V$, $I_E = 0$ f=1MHz		2.8		pF
Noise Figure	NF	$V_{CE} = -6V$, $I_C = -0.3mA$ f=100Hz, $R_S = 10K\Omega$		6.0	20	dB

h_{FE} CLASSIFICATION

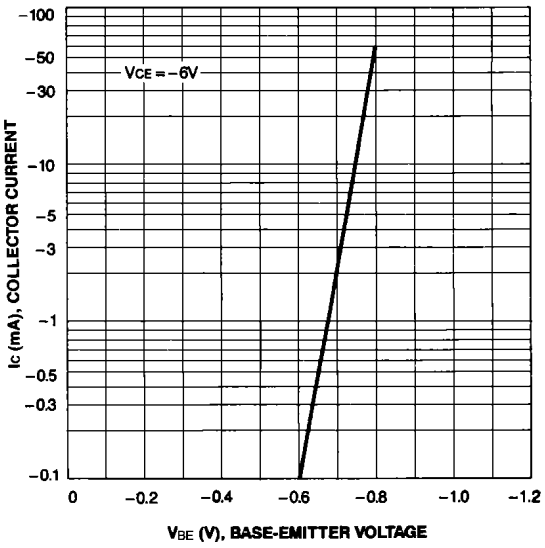
Classification	R	O	Y	G	L
h_{FE}	40-80	70-140	120-240	200-400	350-700

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

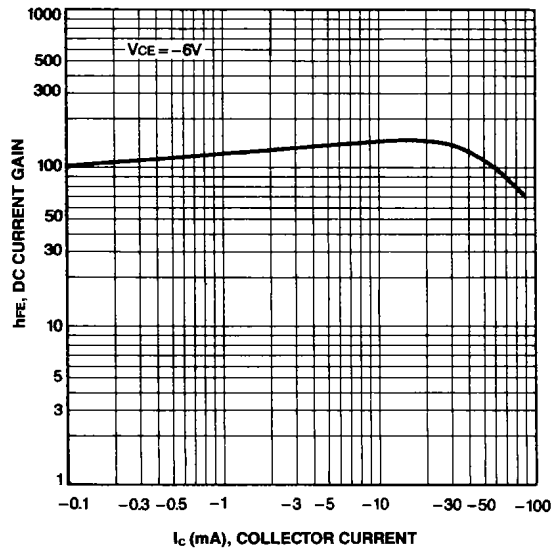
STATIC CHARACTERISTIC



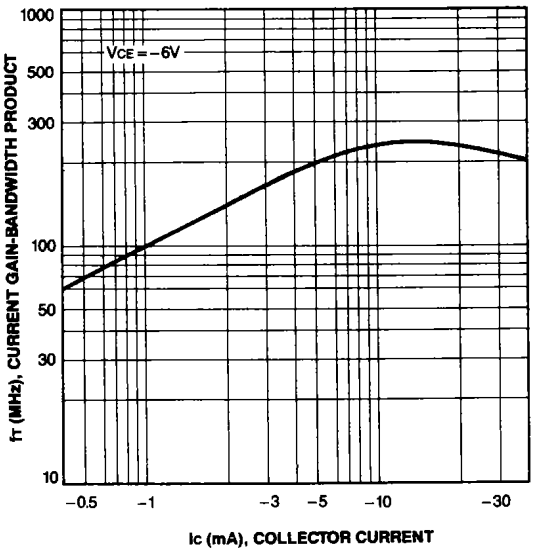
BASE-EMITTER ON VOLTAGE



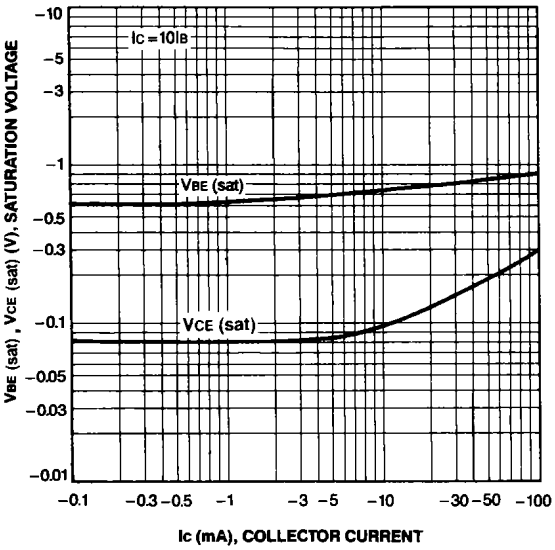
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE