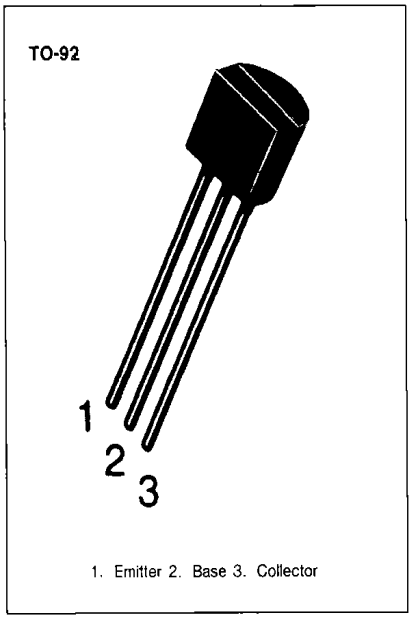
Transistors
2SA643

USHA (INDIA) LTD

LOW FREQUENCY POWER AMPLIFIER

- **Collector Dissipation P_C=500mW**



ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	−40	V
Collector-Emitter Voltage	V_{CEO}	−20	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current (DC)	I_C (DC)	−500	mA
Collector Current (pulse)*	I_C (pulse)*	−700	mA
Collector Dissipaiton	P_C	500	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55~150	°C

* PW≤10mS, duty Cycle≤50%.

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=−100μA, I_E=0	−40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=−10mA, I_B=0	−20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=−100μA, I_C=0	−5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=−25V, I_E=0			−200	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=−3V, I_C=0			−200	nA
DC Current Gain	h_{FE}	V_{CE}=−1V, I_C=−100mA*	40		400	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C=−500mA, I_B=−50mA*		−0.3	−0.4	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C=−500mA, I_B=−50mA*		−1.0	−1.3	V

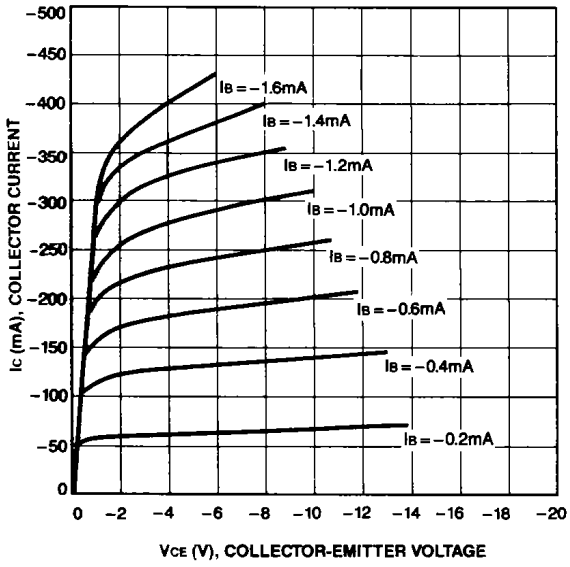
* Pulse Test: PW=350μs, duty cycle=2%

h_{FE} CLASSIFICATION

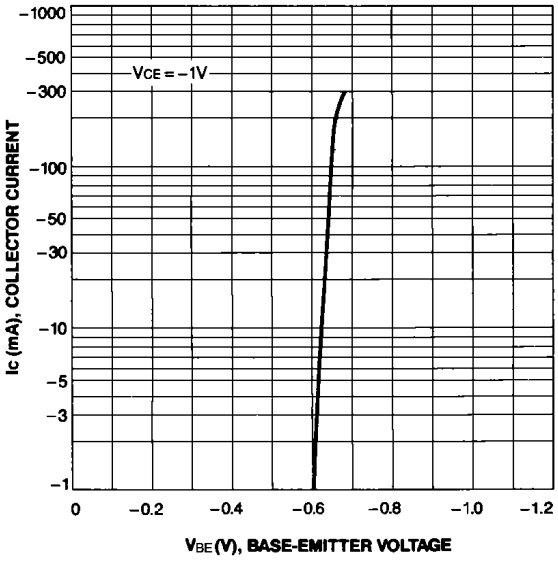
Classification	R	O	Y	G
h_{FE}	40-80	70-140	120-240	200-400

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

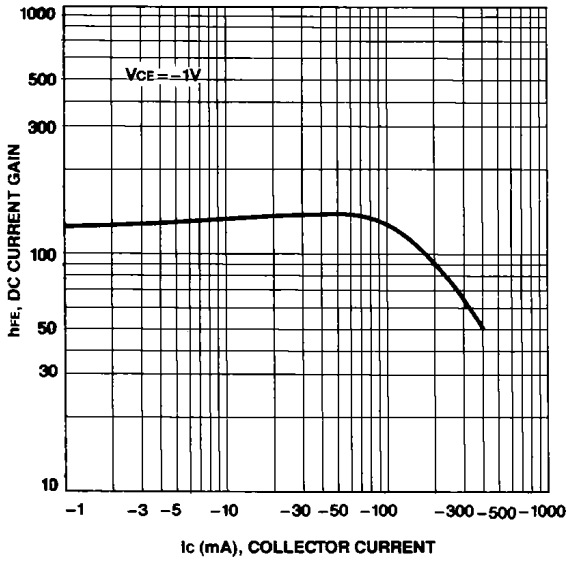
STATIC CHARACTERISTIC



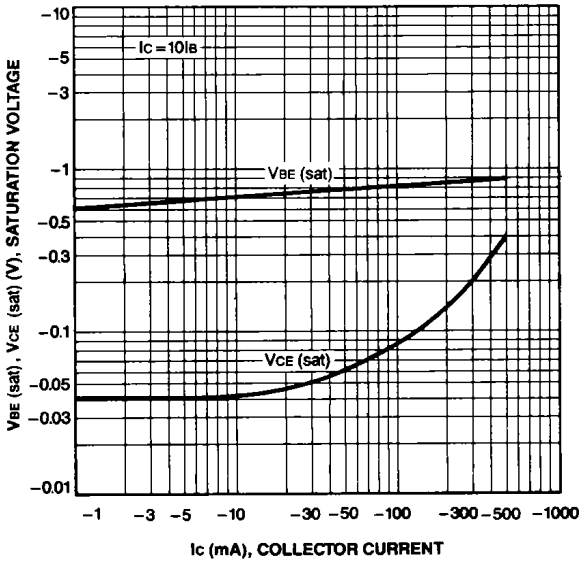
BASE-EMITTER ON VOLTAGE



DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE