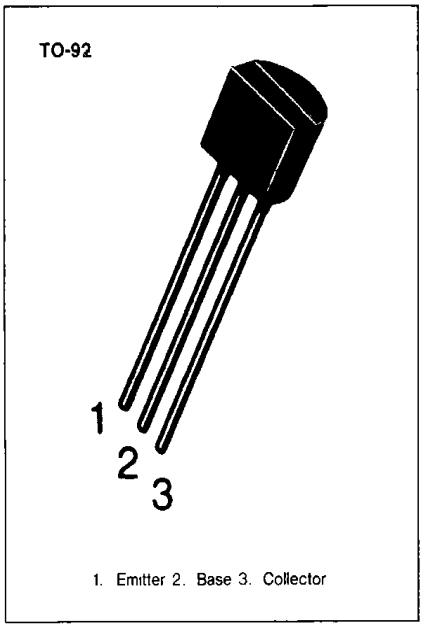
Transistors
2SC1009

USHA (INDIA) LTD

HIGH VOLTAGE AMPLIFIER

- High Collector-Base Voltage V_{CBO} = 160V
- Collector Current I_C = 700mA
- Collector Dissipation P_C = 800mW
- Complement to KSA709



ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	160	V
Collector-Emitter Voltage	V_{CEO}	140	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	700	mA
Collector Dissipation	P_C	800	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_a = 25°C)

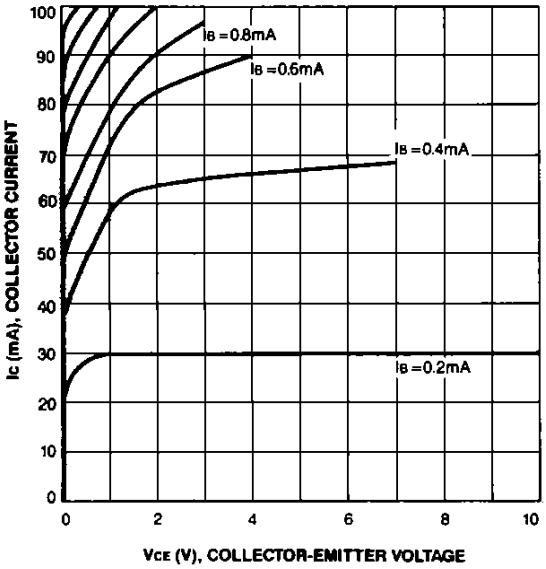
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C = 100μA, I_E = 0	160			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = 10mA, I_B = 0	140			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = 10μA, I_C = 0	8			V
Collector Cut-off Current (Continuous)	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} = 2V, I_C = 50mA	40		400	
Collector-Emitter Saturation Voltage	V_{CE} (sat)	I_C = 200mA, I_B = 20mA		0.2	0.7	V
Base-Emitter Saturation Voltage	V_{BE} (sat)	I_C = 200mA, I_B = 20mA		0.86	1.0	V
Current Gain-Bandwidth Product	f_T	V_{CE} = 10V, I_C = 50mA	30	50		MHz
Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0 f=1MHz		8		pF

h_{FE} CLASSIFICATION

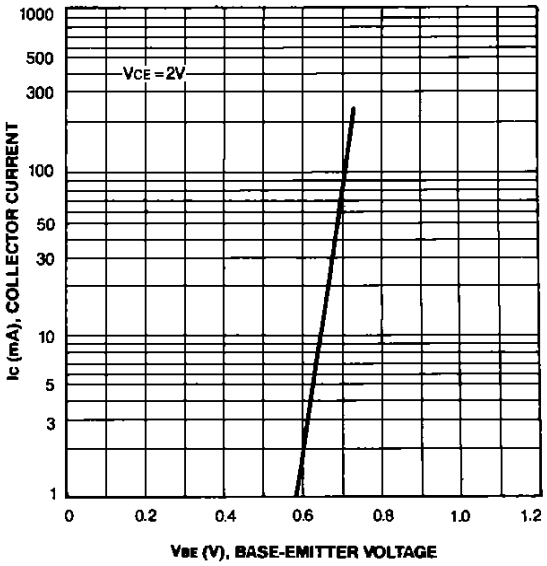
Classification	R	O	Y	G
h_{FE}	40-80	70-140	120-240	200-400

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

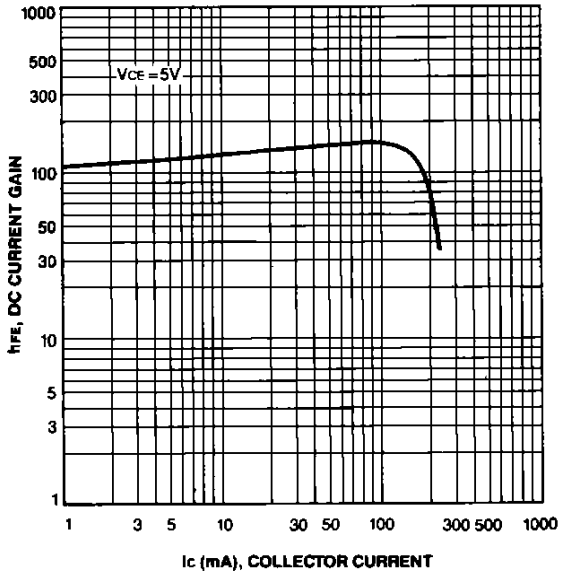
STATIC CHARACTERISTIC



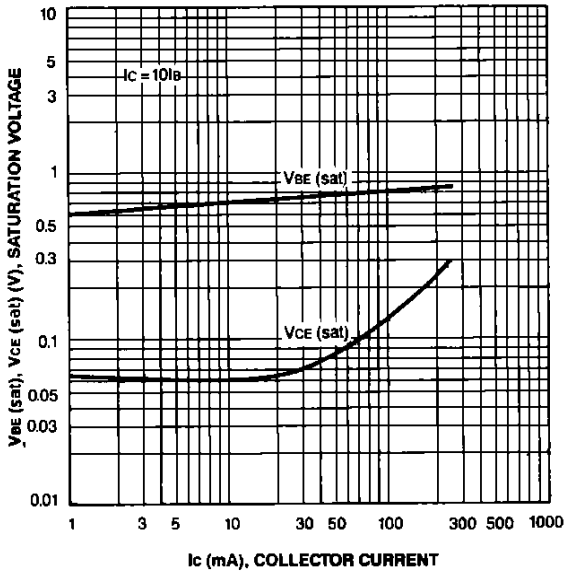
BASE-EMITTER ON VOLTAGE



DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE