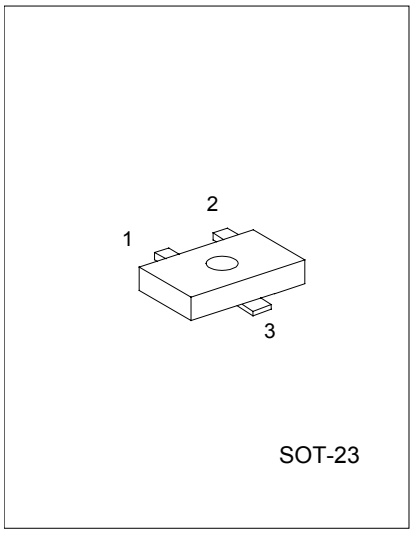
UTC MMBT9014 NPN EPITAXIAL SILICON TRANSISTOR

PRE-AMPLIFIER, LOW LEVEL & LOW NOISE

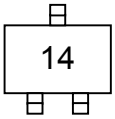


1: EMITTER 2: BASE 3: COLLECTOR

FEATURES

*High total power dissipation. (450mW)
*Excellent hFE linearity.
*Complementary to UTC MMBT9015

MARKING



ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	Ic	100	mA
Collector dissipation	Pc	225	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

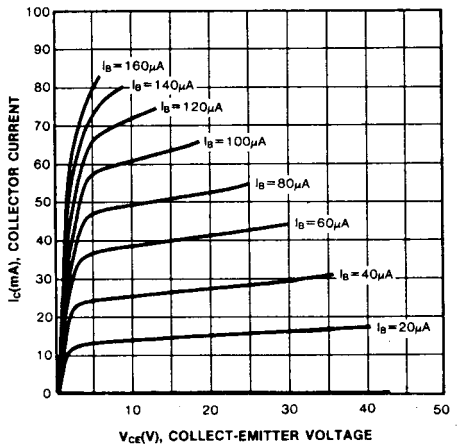
ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CBO}	I_C=100μA, I_E=0	50			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C=1mA, I_B=0	45			V
Emitter-base breakdown voltage	BV_{EBO}	I_E=100μA, I_C=0	5			V
Collector cutoff current	I_{CBO}	V_{CB}=50V, I_E=0			50	nA
Emitter cutoff current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC current gain	hFE	V_{CE}=5V,I_C=1mA	60	280	1000	
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=100mA, I_B=5mA		0.14	0.3	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=100mA, I_B=5mA		0.84	1.0	V
Base-emitter on voltage	V_{BE}(on)	V_{CE}=5V, I_C=2mA	0.58	0.63	0.7	V
Output Capacitance	Cob	V_{CB}=10V, I_E=0, f=1MHz		2.2	3.5	pF
Current gain-Bandwidth Porduct	fT	V_{CE}=5V, I_C=10mA	150	270		MHz
Noise Figure	NF	V_{CE}=5V, I_C=0.2mA f=1KHz, Rs=2KΩ		0.9	10	dB

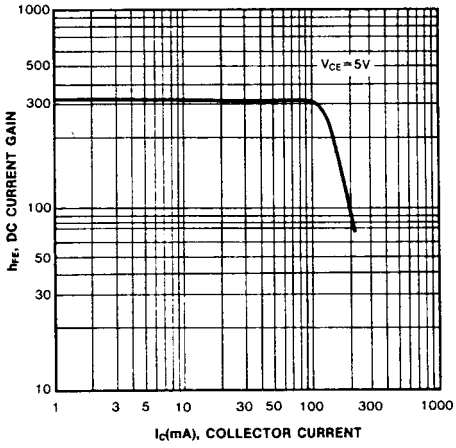
CLASSIFICATION OF hFE

RANK	A	B	C	D
RANGE	60-150	100-300	200-600	400-1000

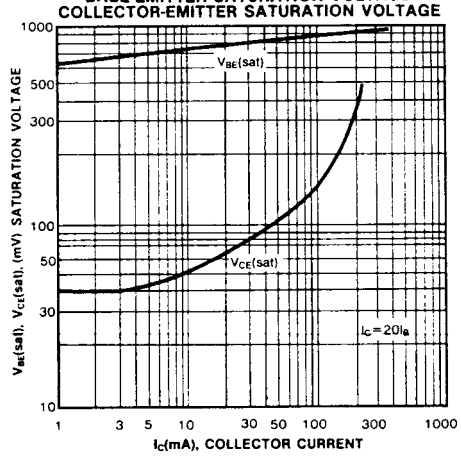
STATIC CHARACTERISTIC



DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT