



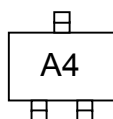
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MMBT1015

Features

- Collector-Emitter Voltage: $B_{V_{CE0}} = -50V$
- Collector current up to 150mA
- High H_{fe} linearity
- Complement to MBT1815

MARKING



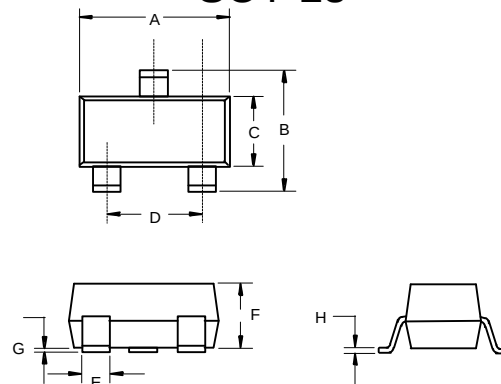
Maximum Ratings

- Junction Temperature: 125°C
- Storage Temperature: -55°C to +150°C

ABSOLUTE MAXIMUM RATINGS $T_a = 25^\circ C$ Unless Otherwise Specified

PARAMETERS	SYMBOL	VALUE	UNIT
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector dissipation	P_C	250	mW
Collector current	I_C	-150	mA
Base Current	I_B	-50	mA
Junction Temperature	T_J	125	°C
Storage Temperature	T_{STG}	-65 to +150	°C

SOT-23



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.106	.122	2.70	3.10	
B	.093	.108	2.35	2.75	
C	.067	.083	1.70	2.10	
D	.047	.059	1.20	1.50	
E	.014	.022	0.35	0.55	
F	.041	.053	1.05	1.35	
G	-----	.004	-----	.10	
H	.003	.008	.08	.20	

ELECTRICAL CHARACTERISTICS Ta=25 °C Unless Otherwise Specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BVCBO	Ic=-100μA, IE=0	-50			V
Collector-emitter breakdown voltage	BVCEO	Ic=-10mA, IB=0	-50			V
Emitter-base breakdown voltage	BVEBO	IE=-10μA, IC=0	-5			V
Collector cut-off current	ICBO	VCE=-50V, IE=0			-100	nA
Emitter cut-off current	IEBO	VEB=-5V, IC=0			-100	nA
DC current gain(note)	hFE1	VCE=-6V, IC=-2mA	70		400	
	hFE2	VCE=-6V, IC=-150mA	25			
Collector-emitter saturation voltage	VCE(sat)	Ic=-100mA, IB=-10mA		-0.1	-0.3	V
Base-emitter saturation voltage	VBE(sat)	Ic=-100mA, IB=-10mA			-1.1	V
Current gain bandwidth product	fT	VCE=-10V, IC=-1mA	80			MHz
Output capacitance	Cob	VCE=-10V, IE=0, f=1MHz		4.0	7.0	pF

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Noise Figure	NF	Ic=-0.1mA, VCE=-6V RG=1kΩ, f=100Hz		0.5	6	dB

CLASSIFICATION OF hFE1

RANK	Y	R
RANGE	120-240	200-400

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

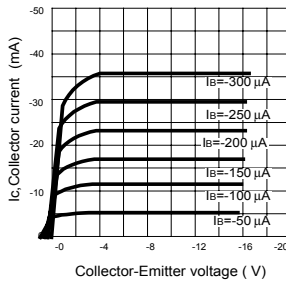


Fig.2 DC current Gain

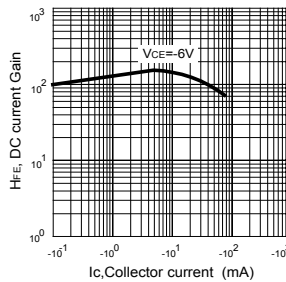


Fig.3 Base-Emitter on Voltage

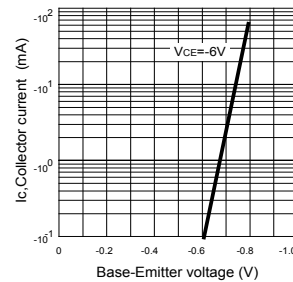


Fig.4 Saturation voltage

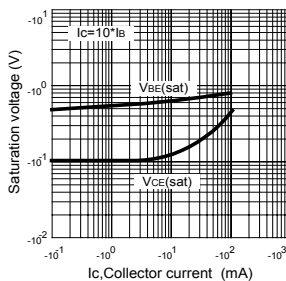


Fig.5 Current gain-bandwidth product

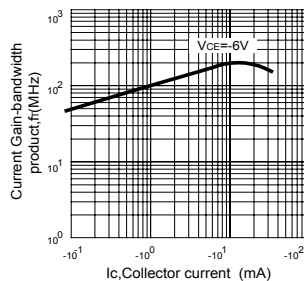


Fig.6 Collector output Capacitance

