S8050 (NPN)

FEATURES

Complimentary to S8550

MARKING: J3Y

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

MAXIMUM RATINGS (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	0.3	W
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	VCBO	IC= 100μA, IE=0	40			V
Collector-emitter breakdown voltage	VCEO	IC=1mA, IB=0	25			V
Emitter-base breakdown voltage	VEBO	IE=100μA, IC=0	5			V
Collector cut-off current	ICBO	VCB=40 V , IE=0			0.1	uA
Collector cut-off current	ICEO	VCB=20V , IE=0			0.1	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain	HFE(1)	VCE=1V, IC= 50mA	120		350	
	HFE(2)	VCE=1V, IC= 500mA	50			
Collector-emitter saturation voltage	VCE(sat)	IC=500 mA, IB= 50mA			0.6	V
Base-emitter saturation voltage	VBE(sat)	IC=500 mA, IB= 50mA			1.2	V
Transition frequency	fT	VCE=6V, IC= 20mA f=30MHz	150			MHz

CLASSIFICATION OF h_{FE}

Rank	L	H	
Range	120-200	200-350	

S8050 Typical Characteristics

FIG.1 - Current Gain & Collector Current

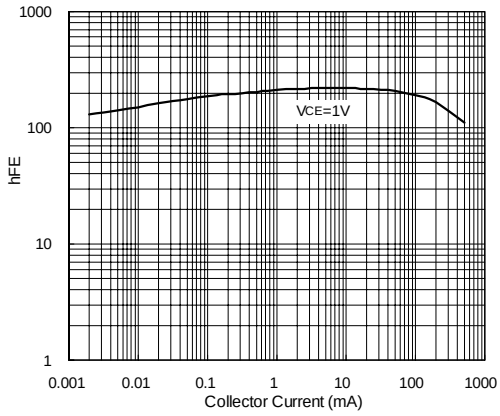

FIG.2 - Saturation Voltage & Collector Current

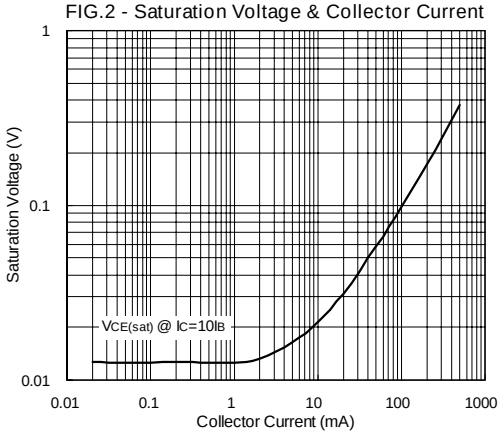

FIG.3 - On Voltage & Collector Current

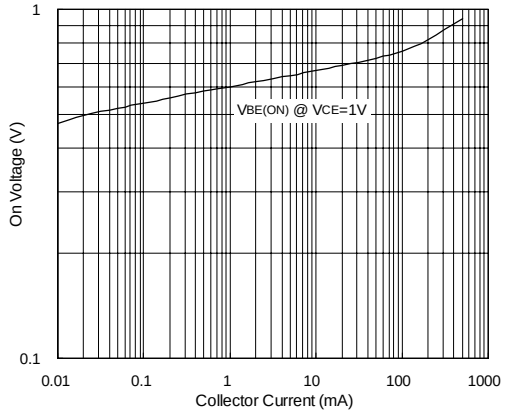

FIG.4 - Cutoff Frequency & Collector Current

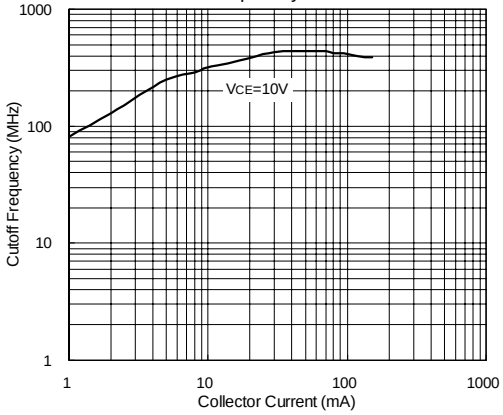

FIG.5 - Capacitance & Reverse-Biased Voltage