

Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

Features

Low $V_{CE(sat)}$, high current.

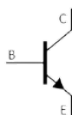
Applications

General purpose switching and muting

LCD back-lighting

Supply line switching circuits.

1. BASE
2. EMITTER
3. COLLECTOR



SOT-23

SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Peak Collector Current	I_{CM}	5	A
Base Current	I_B	0.5	A
Total Power Dissipation	$P_{tot(1)}$	300	mW
	$P_{tot(2)}$	1.2	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-65~150	℃

PBSS4350T

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $I_E=0$			100	nA
		$V_{CB}=50V$ $I_E=0$ $T_J=150^{\circ}C$			50	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=100mA$	300			
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=500mA$	300			
	$h_{FE(3)*}$	$V_{CE}=2.0V$ $I_C=1.0A$	300			
	$h_{FE(4)*}$	$V_{CE}=2.0V$ $I_C=2.0A$	200			
	$h_{FE(5)*}$	$V_{CE}=2.0V$ $I_C=3.0A$	100			
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=500mA$ $I_B=50mA$			80	mV
	$V_{CE(sat)(2)*}$	$I_C=2.0A$ $I_B=100mA$			280	mV
Equivalent On-Resistance	$R_{CE(sat)*}$	$I_C=2.0A$ $I_B=200mA$		100	130	m Ω
Base-Emitter Saturation Voltage	$V_{BE(sat)*}$	$I_C=2.0A$ $I_B=100mA$			1.1	V
		$I_C=3.0A$ $I_B=300mA$			1.2	V
Base-Emitter Voltage	$V_{BE(ON)*}$	$V_{CE}=2.0V$ $I_C=1.0A$			1.2	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=100mA$ $f=100MHz$	100			MHz
Collector Capacitance	C_C	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$			25	pF

RATING AND CHARACTERISTIC CURVES (PBSS4350T)

Fig 1. HFE vs. IC

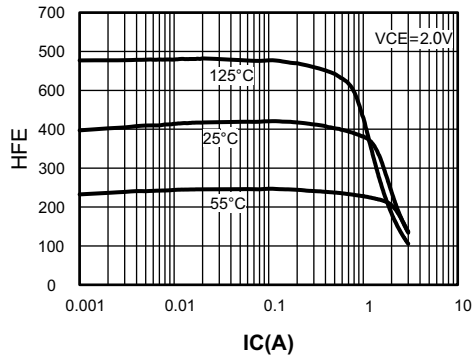


Fig 2. IC vs. VCE

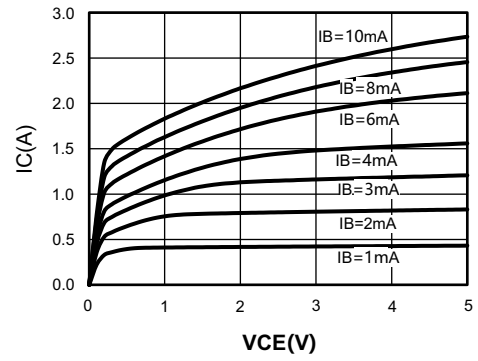


Fig 3. VCE vs. IB

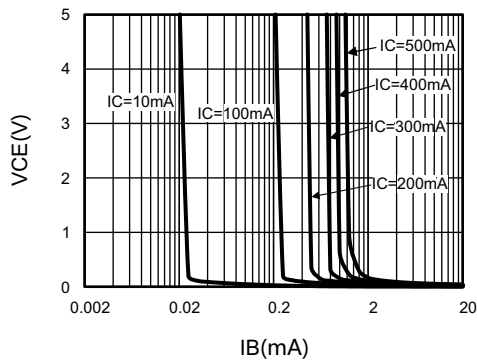


Fig 4. VBE(on) vs. IC

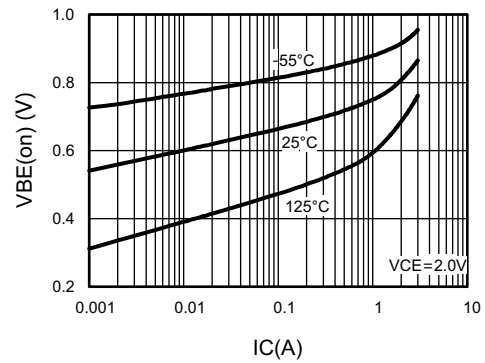


Fig 5. VBE(sat) vs. IC

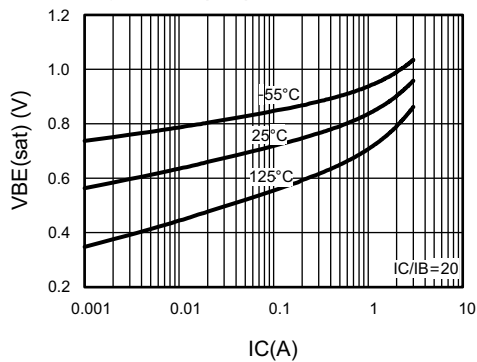


Fig 6. VCE(sat) vs. IC

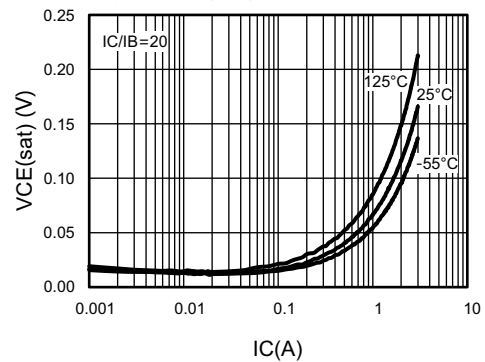


Fig 7. Capacitance

