

SILICON TRANSISTORS 2SC3623, 3623A

NPN SILICON EPITAXIAL TRANSISTOR FOR LOW-FREQUENCY POWER AMPLIFIERS AND SWITCHING

FEATURES

· High hfE:

hfe = 1000 to 3200 @Vce = 5.0 V, Ic = 1.0 mA

Low VcE(sat):

 $V_{CE(sat)} = 0.07 \text{ V TYP}$. @Ic/I_B = 50 mA/5.0 mA

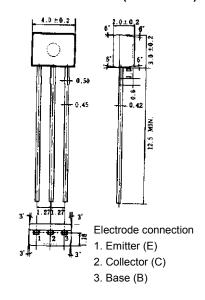
• High VEBO:

VEBO: 12 V (2SC3623) VEBO: 15 V (2SC3623A)

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	Rat	Unit	
Farameter		2SC3623	2SC3623A	Unit
Collector to base voltage	Vсво	60		V
Collector to emitter voltage	Vceo	50		V
Emitter to base voltage	VEBO	12	15	V
Collector current (DC)	Ic(DC)	150		mA
Total power dissipation	Рт	250		mW
Junction temperature	Tj	150		°C
Storage temperature	T _{stg}	-55 to +150		°C

PACKAGE DRAWING (UNIT: mm)



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Not all devices/types available in every country. Please check with local NEC representative for availability and additional information.



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

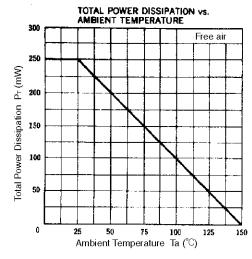
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	Ісво	V _{CB} = 50 V, I _E = 0			100	nA
Emitter cutoff current	ІЕВО	V _{EB} = 10 V, I _C = 0			100	nA
DC current gain	h _{FE1}	Vce = 5.0 V, Ic = 1.0 mA*	1000	1800	3200	-
DC current gain	h _{FE2}	Vce = 5.0 V, Ic = 100 mA*	200	350		
DC base voltage	V _{BE}	Vce = 5.0 V, Ic = 1.0 mA*		560		mV
Collector saturation voltage	V _{CE(sat)}	Ic = 50 mA, Iв = 5.0 mA*		0.07	0.30	V
Base saturation voltage	V _{BE(sat)}	Ic = 50 mA, Iв = 5.0 mA*		0.8	1.2	V
Gain bandwidth product	f⊤	$V_{CE} = 5.0 \text{ V}, I_{E} = -10 \text{ mA}$		250		MHz
Output capacitance	Cob	V _{CB} = 5 V, I _E = 0, f = 1.0 MHz		3.0		pF
Turn-on time	ton	$V_{CC} = 10 \text{ V}, V_{BE(off)} = -2.7 \text{ V}$		0.13		μs
Storage time	t stg	Ic = 50 mA		0.72		μs
Turn-off time	toff	$I_{B1} = -I_{B2} = 1 \text{ mA}$		1.22		μs

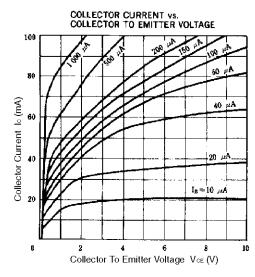
^{*} Pulse test PW \leq 350 μ s, duty cycle \leq 2%

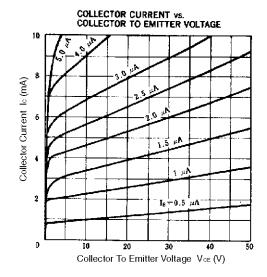
hfe CLASSIFICATION

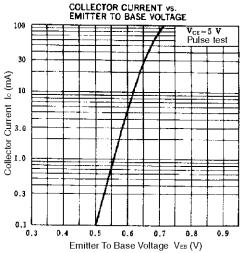
Marking	L	K
h _{FE1}	1000 to 2000	1600 to 3200

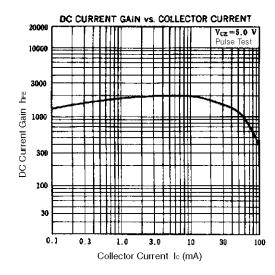
TYPICAL CHARACTERISTICS (Ta = 25°C)

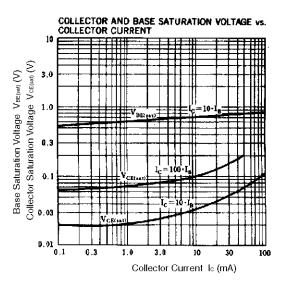


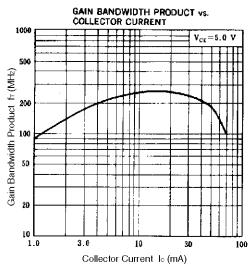


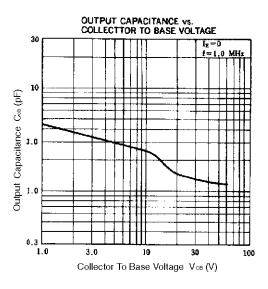


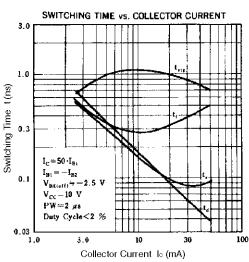












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