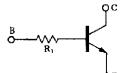


COMPOUND TRANSISTOR **BA1L4Z**

on-chip resistor NPN silicon epitaxial transistor For mid-speed switching

FEATURES

 On-chip bias resistor (R₁ = 47 kΩ)



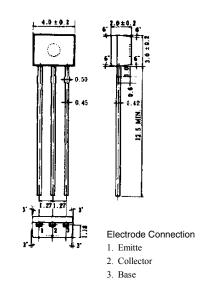
· Complementary transistor with BN1L4Z

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	Ratings	Unit	
Collector to base voltage	Vсво	60	V	
Collector to emitter voltage	VCEO	50	V	
Emitter to base voltage	VEBO	5	V	
Collector current (DC)	Ic(DC)	100	mA	
Collector current (Pulse)	Ic(pulse) *	200	mA	
Total power dissipation	Рт	250	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

^{*} PW \leq 10 ms, duty cycle \leq 50 %

PACKAGE DRAWING (UNIT: mm)



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	Ісво	Vcb = 50 V, IE = 0			100	nA
DC current gain	h _{FE1} **	Vce = 5.0 V, Ic = 5.0 mA	135	270	600	-
DC current gain	hFE2 **	Vce = 5.0 V, Ic = 50 mA	100	260		-
Collector saturation voltage	V _{CE(sat)} **	Ic = 5.0 mA, Iв = 0.25 mA		0.05	0.2	V
Low level input voltage	VIL **	$V_{CE} = 5.0 \text{ V}, \text{ Ic} = 100 \mu\text{A}$		0.57	0.5	V
High level input voltage	V _{IH} **	Vce = 0.2 V, Ic = 5.0 mA	4.0	1.7		٧
Input resistance	R ₁		32.9	47	61.1	kΩ
Turn-on time	ton	$Vcc = 5.0 \text{ V}, \text{ RL} = 1.0 \text{ k}\Omega$			0.2	μs
Storage time	tstg	V _I = 5.0 V, PW = 2.0 μs			5.0	μs
Turn-off time	toff	duty cycle≤2 %			6.0	μs

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

hfe CLASSIFICATION

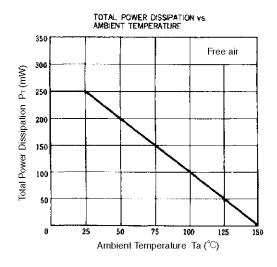
Marking	Q	Р	K
h _{EE1}	135 to 270	200 to 400	300 to 600

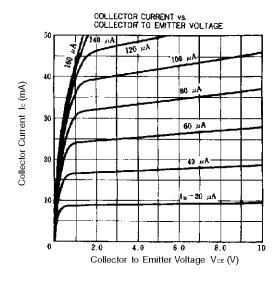
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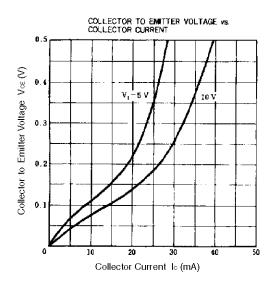
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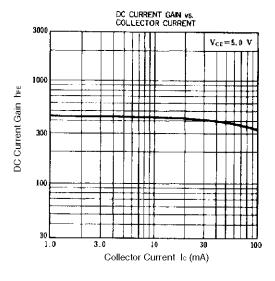


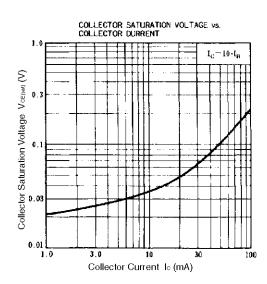
TYPICAL CHARACTERISTICS (Ta = 25°C)

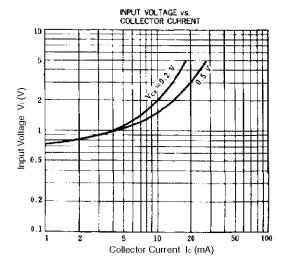


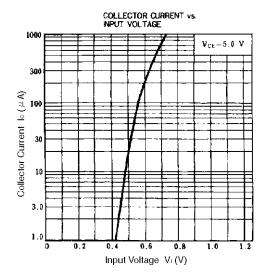


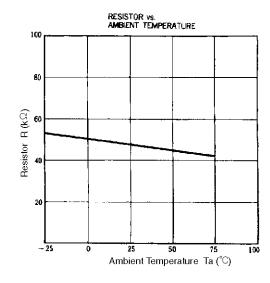












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