UNA0230 (UN230)

Transistor array to drive the small motor

Features

- Small and lightweight
- Low power consumption
- Low-voltage drive
- With 4 elements incorporated

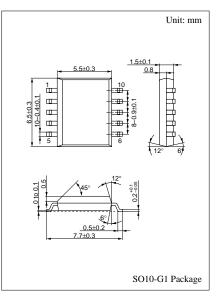
Applications

- For motor drives
- Small motor drive circuits in general

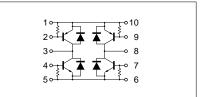
Parameter	Symbol	Ratings	Unit			
Collector to base voltage	V _{CBO}	±10	V			
Collector to emitter voltage	V _{CEO}	±10	V			
Collector current	I _C	±3	А			
Peak collector current	I _{CP}	±4	А			
Total power dissipation	P _T *	0.5	W			
Junction temperature	Tj	150	°C			
Storage temperature	T _{stg}	-55 to +150	°C			

Absolute Maximum Ratings (Ta=25±3°C)

Note: \pm marks used above: +: NPN part, -: PNP part * T_C = 25°C only when the elements are active



Internal Connection

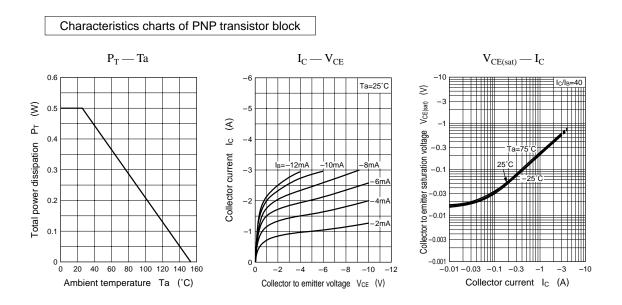


Note.) The Part number in the Parenthesis shows conventional part number.

Parameter	Symbol	Conditions	min	typ	max	Unit	
Collector to base voltage	V _{CBO}	(NPN) $I_{\rm C} = 10\mu A, I_{\rm E} = 0$	10			V	
		(PNP) $I_{C} = -10\mu A, I_{E} = 0$	-10			V	
Collector to emitter voltage	V _{CEO}	(NPN) $I_{C} = 1mA, I_{B} = 0$	10			V	
		(PNP) $I_{C} = -1mA, I_{B} = 0$	-10			V	
Collector cutoff current	I _{CBO}	(NPN) $V_{CB} = 6V, I_E = 0$			1		
		(PNP) $V_{CB} = -6V, I_E = 0$			-1	- μΑ	
Forward current transfer ratio	h _{FE}	(NPN) $V_{CE} = 1V, I_C = 0.5A^*$	200		700		
		(PNP) $V_{CE} = -1V, I_C = -0.5A^*$	200		700	1	
Collector to emitter saturation voltage	V _{CE(sat)}	(NPN) $I_{C} = 2A, I_{B} = 50mA^{*}$			0.25		
		(PNP) $I_{C} = -2A, I_{B} = -50mA^{*}$			- 0.45	V	
Transition frequency	f _T	(NPN) $V_{CB} = 6V$, $I_E = -50mA$, $f = 200MHz$		150		MI	
		(PNP) $V_{CB} = -6V$, $I_E = 50mA$, $f = 200MHz$		150		MHz	
Collector output capacitance	C _{ob}	(NPN) $V_{CB} = 6V, I_E = 0, f = 1MHz$		50		Г	
		(PNP) $V_{CB} = -6V$, $I_E = 0$, $f = 1MHz$		70		pF	
Forward voltage (DC)	V _F	(NPN) $I_F = 1A$			1.5	- v	
		(PNP) $I_F = -1A$			1.5		
Bias resistance	R _{EB}		-30%	10	+30%	kΩ	

Electrical Characteristics (Ta=25°C)

*Pulse measurement

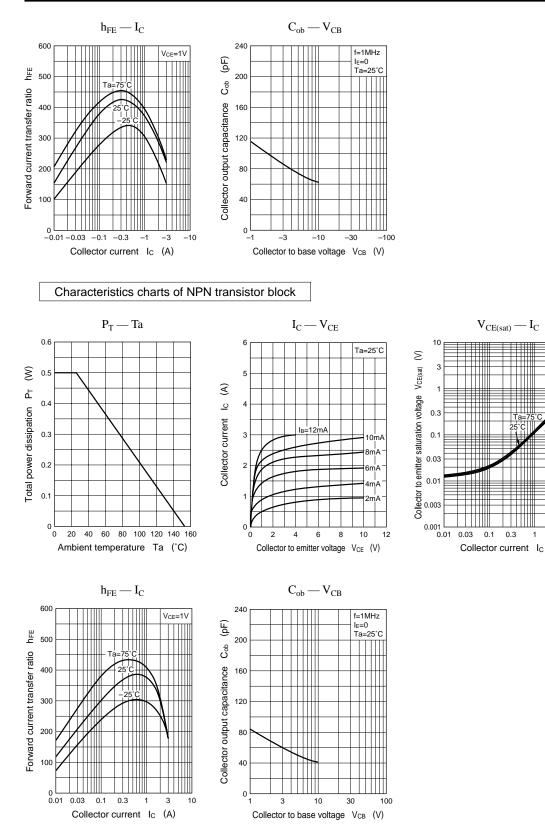


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