

UNA0232

Transistor array to drive the small motor

■ Features

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

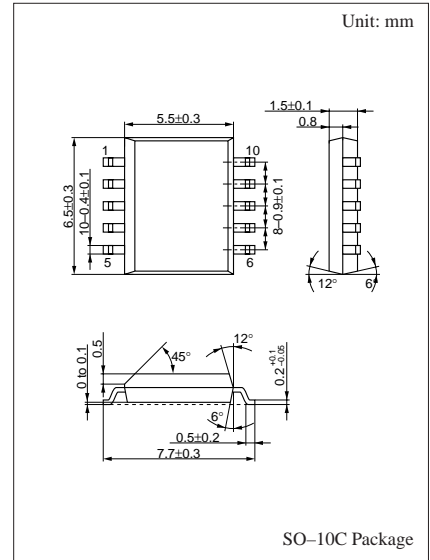
■ Applications

- For motor drives
- Small motor drive circuits in general

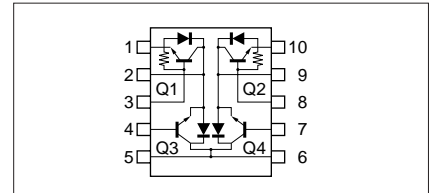
■ Absolute Maximum Ratings (Ta=25±3°C)

Parameter	Symbol	Rated	Unit
Collector to base voltage	V_{CBO}	12	V
Collector to emitter voltage	V_{CEO}	10	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1	A
Peak collector current	I_{CP}	2	A
Total power dissipation	P_T^*	0.5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{sig}	-55 to +150	°C

* $T_C = 25^\circ\text{C}$ only when the elements are active



Internal Connection



■ Electrical Characteristics (T_a=25°C)

● UN0232 (Q₁, Q₂)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V _{CBO}	I _C = 10μA, I _E = 0	12			V
Collector to emitter voltage	V _{CEO}	I _C = 0.1mA, I _B = 0	10			V
Emitter cutoff current	I _{EBO}	V _{EB} = 5V, I _C = 0	0.8		1.6	mA
Collector cutoff current	I _{CBO}	V _{CB} = 10V, I _E = 0			1	μA
Forward current transfer ratio	h _{FE}	V _{CE} = 1V, I _C = 0.5A*	200		700	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 0.5A, I _B = 25mA*		0.1	0.15	V
Bias resistance	R _{EB}		3.3	4.7	6.1	kΩ
Forward voltage	V _F	I _F = 1A			1.5	V

● UN0232 (Q₃, Q₄)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V _{CBO}	I _C = 10μA, I _E = 0	12			V
Collector to emitter voltage	V _{CEO}	I _C = 0.1mA, I _B = 0	10			V
Emitter to base voltage	V _{EBO}	I _E = 10μA, I _C = 0	7			V
Collector cutoff current	I _{CBO}	V _{CB} = 10V, I _E = 0			1	μA
Forward current transfer ratio	h _{FE}	V _{CE} = 1V, I _C = 0.5A*	200		700	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 0.5A, I _B = 25mA*		0.1	0.15	V
Forward voltage	V _F	I _F = 1A			1.5	V

*Pulse measurement

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