

TA8323F

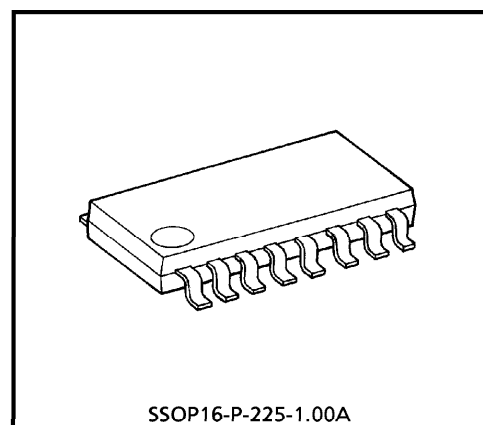
LOW SATURATION VOLTAGE DRIVER FOR MOTOR

TA8323F is Multi Chip IC incorporates 6 low saturation discrete transistors which equipped bias resistor and free-wheeling diode.

This IC is suitable for a battery use motor drive applications.

FEATURES

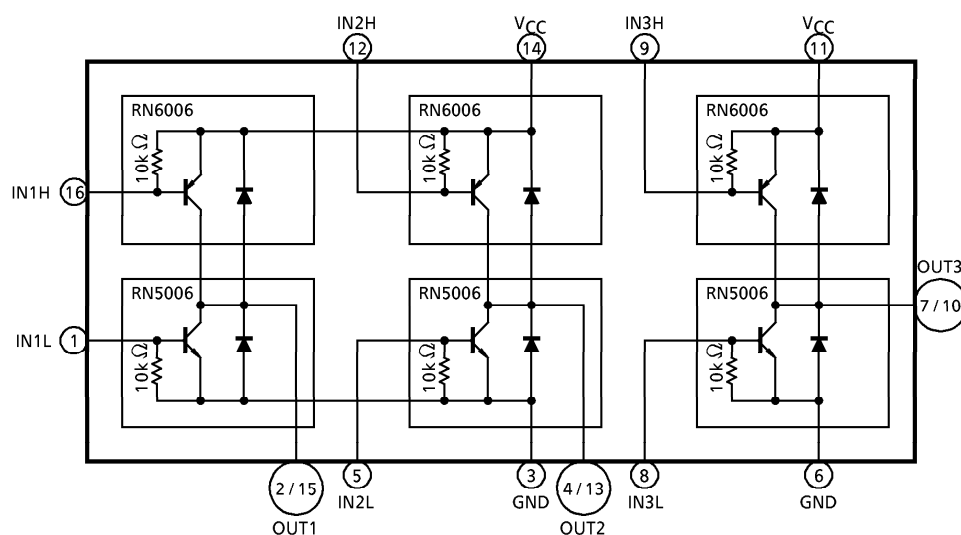
- Suitable for High Efficiency Motor Drive Circuit.
- Built-in Free-Wheeling Diode
- Built-in Bias Resistor : $R = 10k\Omega$
- Small Package sealed : SSOP16
- Low Saturation Voltage



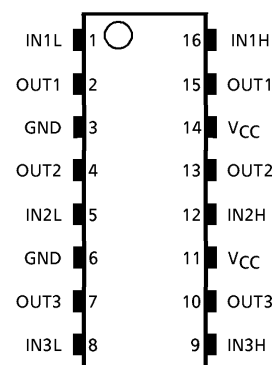
SSOP16-P-225-1.00A

Weight : 0.14g (Typ.)

BLOCK DIAGRAM



PIN CONNECTION



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	10	V
Breakdown Voltage	V _{CBO}	10	V
	V _{CEO}	10	V
	V _{EBO}	6	V
Output Current	I _O	2	A
	I _{O (peak)}	4 (Note 1)	
Base Current	I _B	± 0.4	A
	I _{B (peak)}	± 0.8 (Note 1)	
Diode Forward Current	I _F	2 (Note 2)	A
Power Dissipation	P _D	490	mW
Junction Temperature	T _j	150	°C
Operating Temperature	T _{opr}	− 40~85	°C
Storage Temperature	T _{stg}	− 55~150	°C

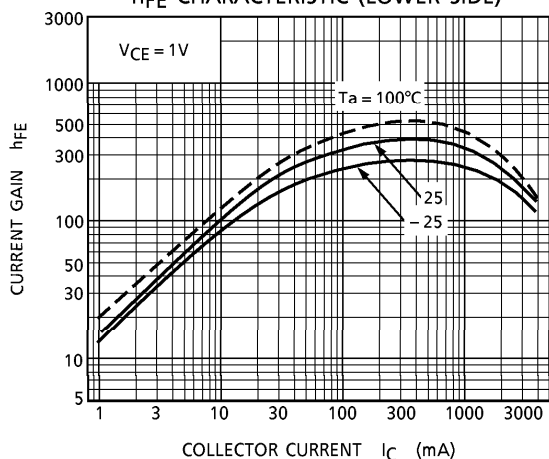
(Note 1) T = 10ms Max. and maximum duty is less than 30%

(Note 2) T = 10ms single pulse

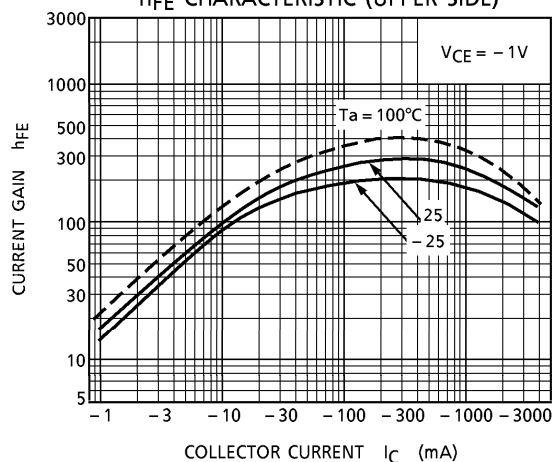
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain		h _{FE} (1)	—	V _{CE} = 1V, I _C = 0.5A	160	—	600	
		h _{FE} (2)	—	V _{CE} = 1V, I _C = 2.0A	60	130	—	
Saturation Voltage	Upper Side	V _{CE (sat)}	—	I _C = 1A, I _B = 25mA	—	0.16	0.22	V
				I _C = 2A, I _B = 50mA	—	0.28	0.45	
	Lower Side			I _C = 1A, I _B = 25mA	—	0.13	0.32	
				I _C = 2A, I _B = 50mA	—	0.25	0.45	
	Summing Total			I _C = 1A, I _B = 25mA	—	0.29	0.52	
				I _C = 2A, I _B = 50mA	—	0.53	0.85	
Transition Frequency		f _T	—	V _{CE} = 2V, I _C = 0.5A	—	150	—	MHz
Leakage Current	Upper Side	I _{OL}	—	V _{CC} = 10V	—	0	5	μA
	Lower Side			V _{CC} = 10V	—	0	5	
Diode Forward Voltage	Upper Side	V _F	—	I _F = 300mA	—	0.89	1.2	V
				I _F = 450mA 10ms Pulse measure	—	1.60	—	
	Lower Side			I _F = 300mA	—	0.89	1.2	
				I _F = 450mA 10ms Pulse measure	—	1.60	—	
Base-Emitter Resistance		R _{BE}	—		7	10	13	kΩ
Base-Emitter Forward Voltage		V _{BE} (PNP)	—	V _{CE} = − 1V, I _C = 2A	—	0.84	1.5	V
		V _{BE} (NPN)	—	V _{CE} = 1V, I _C = 2A	—	0.84	1.5	

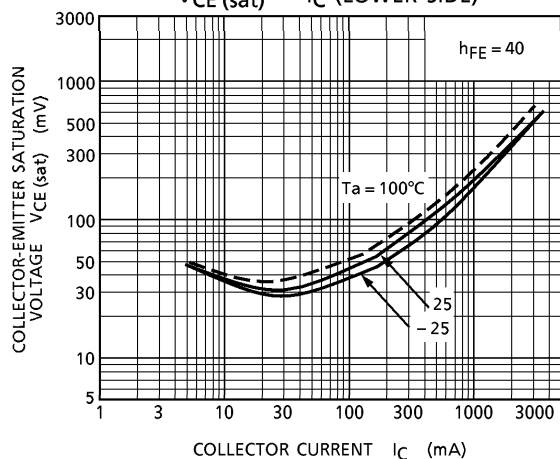
TRANSISTOR (RN5006)
 h_{FE} CHARACTERISTIC (LOWER SIDE)



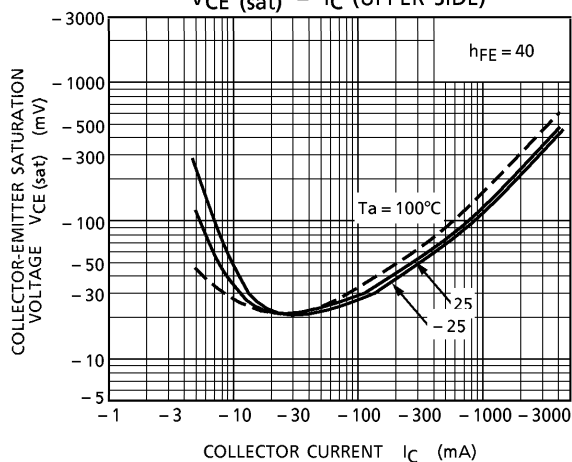
TRANSISTOR (RN6006)
 h_{FE} CHARACTERISTIC (UPPER SIDE)



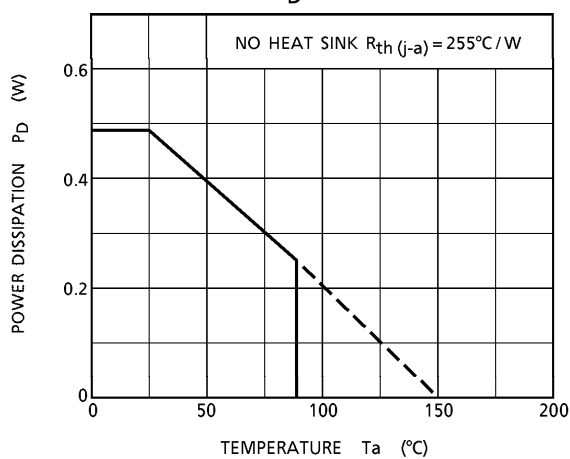
TRANSISTOR (RN5006)
 $V_{CE(sat)} - I_C$ (LOWER SIDE)



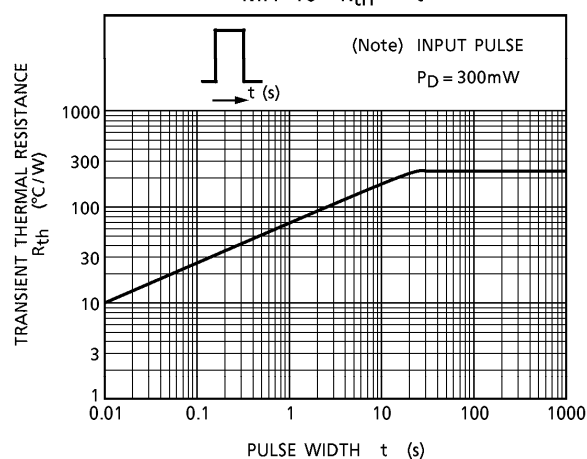
TRANSISTOR (RN6006)
 $V_{CE(sat)} - I_C$ (UPPER SIDE)



$P_D - T_a$

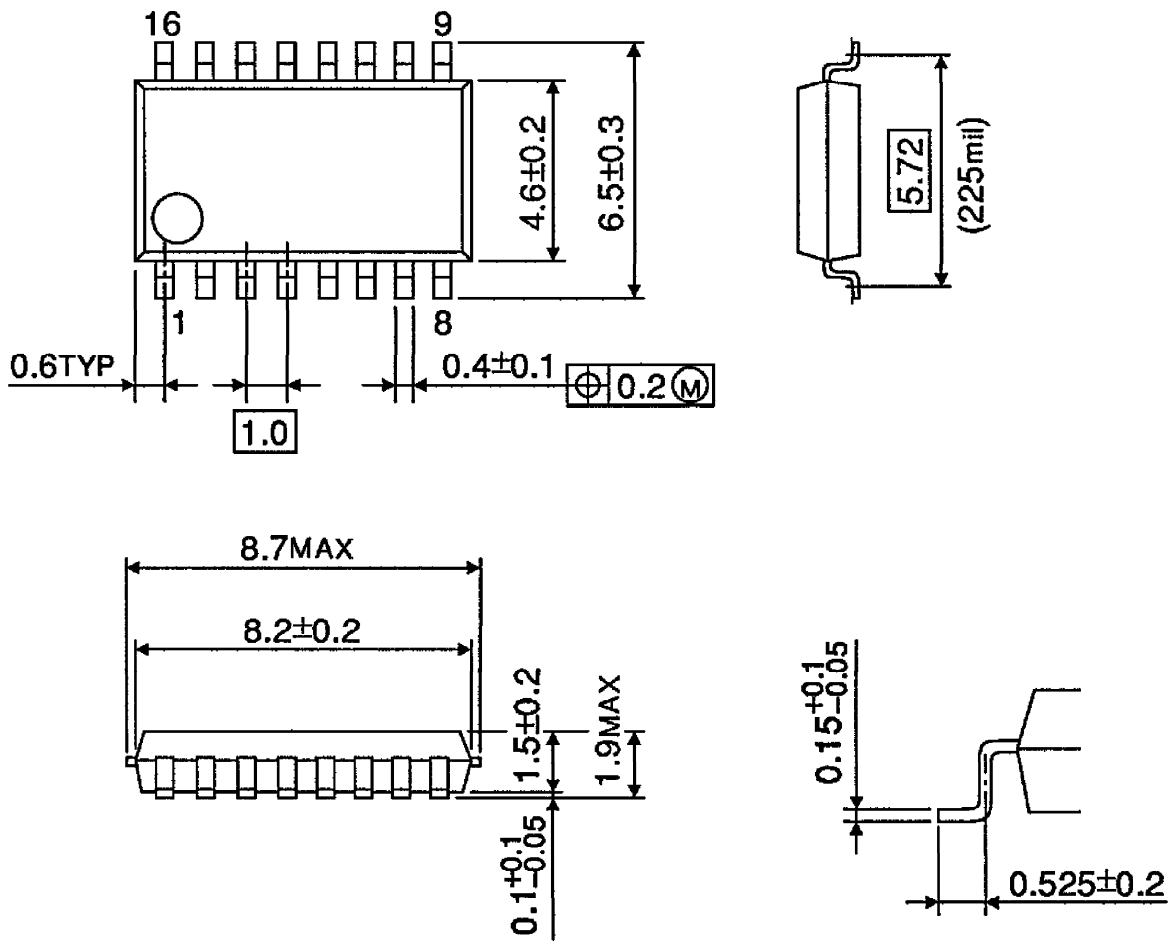


MFP-16 $R_{th} - t$



PACKAGE DIMENSIONS
SSOP16-P-225-1.00A

Unit : mm



Weight : 0.14g (Typ.)

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