TENTATIVE

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8300F

MOTOR DRIVER FOR CAMERA

TA8300F is Multi Chip IC incorporates 6 low saturation discrete transistors which equipped bias resistor. This IC is suitable for a camera use motor drive applications.

FEATURES

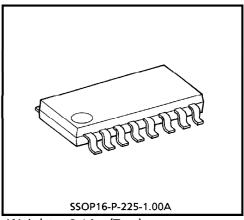
• Suitable for high efficiency motor drive circuit.

• Built-in Bias Resistor : $R = 10k\Omega$

Small package sealed : SSOP16

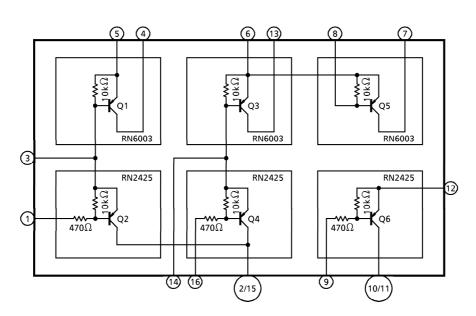
• Low saturation voltage

• H-bridge (only upper side)



Weight : 0.14g (Typ.)

BLOCK DIAGRAM



FUNCTION DESCRIPTION ON EACH TERMINAL

PIN No.	FUNCTION				
1	Tr. Q2	Input Terminal			
2	Tr. Q2, Q4	Output Terminal			
3	Tr. Q1	Input Terminal			
4	Tr. Q1	Output Terminal			
5	Tr. Q1	Supply Voltage			
6	Tr. Q3, Q5	Supply Voltage			
7	Tr. Q5	Output Terminal			
8	Tr. Q5	Input Terminal			
9	Tr. Q6	Input Terminal			
10	Tr. Q6	Output Terminal			
11	Tr. Q6	Output Terminal			
12	Tr. Q6	Supply Voltage			
13	Tr. Q3	Output Terminal			
14	Tr. Q3	Input Terminal			
15	Tr. Q2, Q4	Output Terminal			
16	Tr. Q4	Input Terminal			

MAXIMUM RATINGS (Ta = 25° C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	7.0	V
	V _{CBO}	7.0	V
Breakdown Voltage	VCEO	7.0	V
	V _{EBO}	5.0	V
Output Current	lout	0.8	Α
Base Current	Ι _Β	0.4	Α
Power Dissipation	PD	490	mW
Junction Temperature	Tj	150	°C
Operating Temperature	T _{opr}	- 20~60	°C
Storage Temperature	T _{stg}	<i>-</i> 55∼150	°C

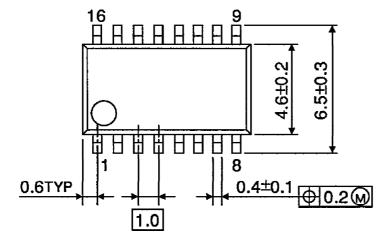
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

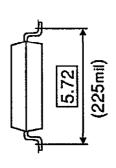
CHARACTERISTIC	SYMBOL	MEASURING Tr	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Current Gain	h _{FE} 1	RN6003	_	$V_{CE} = -2V, I_{C} = -500mA$	100	400	_	
	h _{FE 2}	RN2425	_	$V_{CE} = -1V$, $I_{C} = -100$ mA	100	_	_	
Saturation	VCE 1	RN6003	_	$I_C = -500 \text{mA}, I_B = -50 \text{mA}$	- 0.5	_	_	V
Voltage	V _{CE 2}	RN2425	_	$I_C = -50 \text{mA}, I_B = -1 \text{mA}$	- 0.5	_	_	V
Leakage Current	lOFF	RN6003	-	V _{CC} = 7V	_	_	1.0	μΑ
		RN2425						
Input Resistance	R ₁	RN6003	_		7	10	13	$\mathbf{k}\Omega$
	R ₂	RN2425	_		0.329	0.47	0.61	kΩ
Resistance Ratio	R ₂ ′	RN2425	_		0.042	_	0.051	
Transition	f _{T1}	RN6003	_	$V_{CE} = -2V$, $I_{C} = -500$ mA	_	120	_	MHz
Frequency	f _{T2}	RN2425	_	$V_{CE} = -5V$, $I_{C} = -100$ mA	_	200	_	MHz

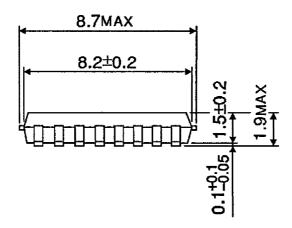
Unit: mm

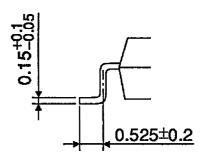
PACKAGE DIMENSIONS

SSOP16-P-225-1.00A









Weight: 0.14g (Typ.)

RESTRICTIONS ON PRODUCT USE

000707EBA

- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc..
- The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in this document shall be made at the customer's own risk.
- The products described in this document are subject to the foreign exchange and foreign trade laws.
- ◆ The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.