Ordering number: EN 266E

Monolithic Digital IC

NO.266E

LB1287,1288

Darlington Transistor Array

These ICs have circuit configuration of 5-unit Darlington transistor array consisting of NPN transistors and are capable of causing small input current to provide large current drive. They can be advantageously incorporated in equipment because the specially designed 14-pin DIP makes such equipment more compact.

Features

. Large maximum drive current.	400mA
. Large allowable power dissipation.	1.15W
. Wide range of operating supply voltage.	LB1287 5 to 30V, LB1288 5 to 20V
. Wide range of operating temperature.	-20 to +80°C
. Large current-amplification factor.	2000 or more

Applications

. Various types of driver(relay, solenoid, motor, etc.).
. Display segment or digit driver (LED, lamp).
. Interface to MOS or bipolar logic IC.
. Power amplification of pulse (fan-out extension, etc.).

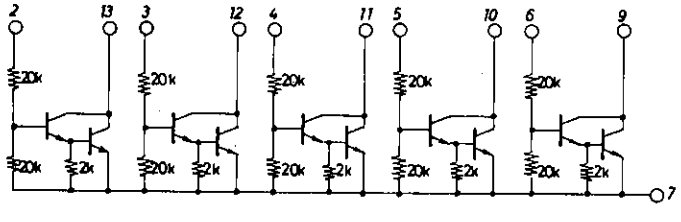
Absolute Maximum Ratings at T_a=25°C

				unit
Collector-Base Voltage	V_{CBO}	[LB1287]	30	V
		[LB1288]	20	V
Collector-Emitter Voltage	V_{CEO}*	[LB1287]	-0.7 to +30	V
		[LB1288]	-0.7 to +20	V
Allowable Power Dissipation	$P_d$max		1.15	W
Input Voltage	V_{in}	Per unit	-0.7 to +45	V
Collector Current	I_C	Per unit	500	mA
Junction Temperature	T_j		125	°C
Operating Temperature	Topr		-20 to +80	°C
Storage Temperature	T_{stg}		-40 to +125	°C

* : The substrate is connected to emitter.

Equivalent Circuit

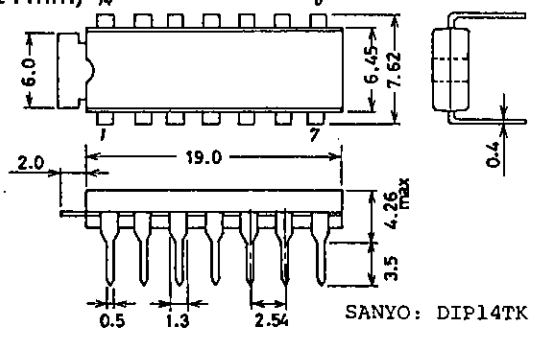
Unit (resistance: Ω)



Note 1. Pins 1, 8, 14 : NC
Note 2. The substrate is connected to pin 7.

Package Dimensions 3004A-D14TKIC

(unit : mm)



SANYO: DIP14TK

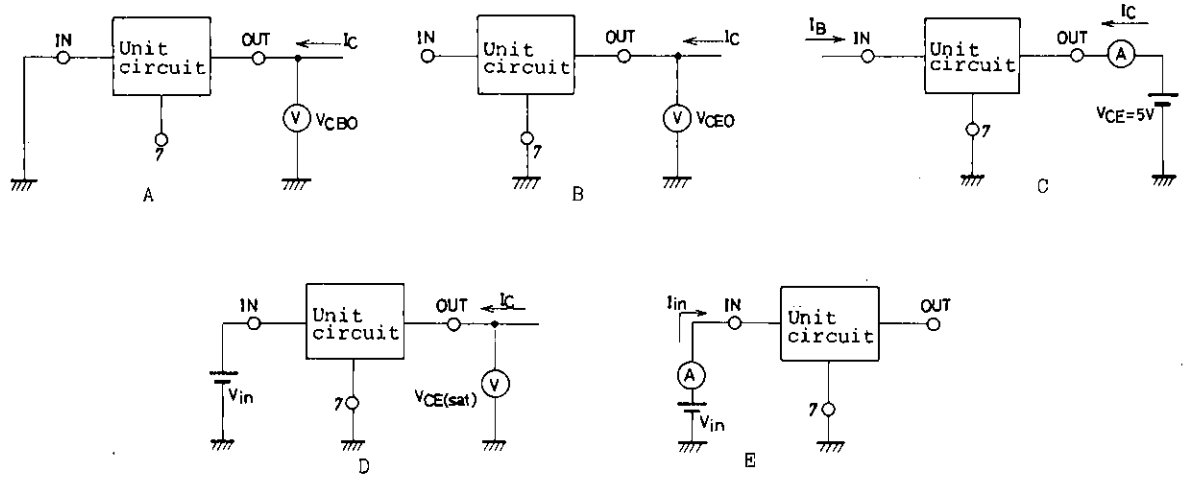
Allowable Operating Conditions at Ta=25°C

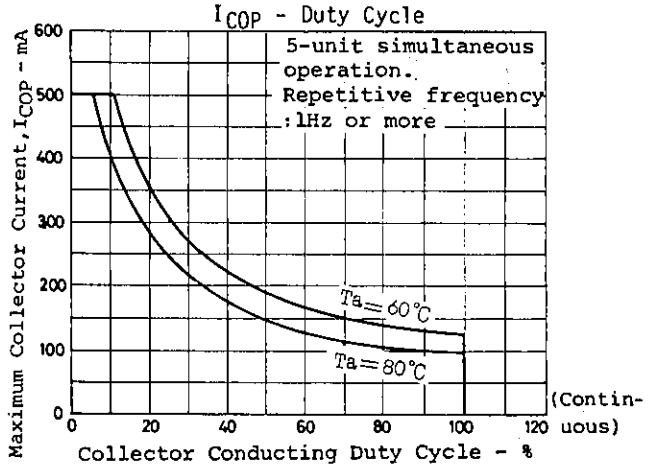
				unit
Supply Voltage	V_{CC}	[LB1287]	5 to 30	V
		[LB1288]	5 to 20	V
Collector Current	$I_{cop}(1)$	Turning ON 5 units simultaneously, Ta=80°C, 20% duty	280	mA
	$I_{cop}(2)$	Turning ON 5 units simultaneously, Ta=80°C 50% duty	150	mA
	$I_{cop}(3)$	Turning ON 5 units simultaneously, Ta=80°C, DC	100	mA

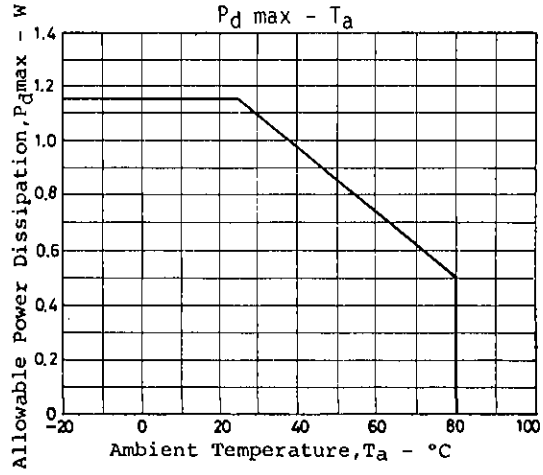
Electrical Characteristics at Ta=25°C

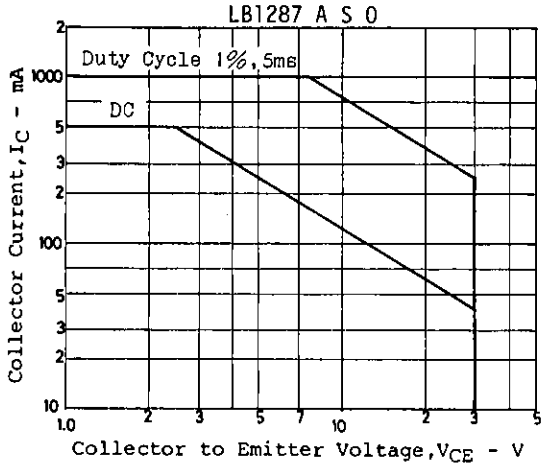
				Test circuit	min	typ	max	unit
Collector-Base Voltage	V_{CBO}	I_C=50μA	[LB1287]	A	30			V
			[LB1288]	A	20			V
Collector-Emitter Voltage	V_{CEO}	I_C=100μA	[LB1287]	B	30			V
			[LB1288]	B	20			V
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=200mA		C	2000			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V_{in}=12V, I_C=400mA		D			2.3	V
		V_{in}=9.5V, I_C=300mA		D			1.8	V
		V_{in}=7.0V, I_C=200mA		D			1.4	V
Input Current	I_{in}	V_{in}=17V		E		0.8		mA

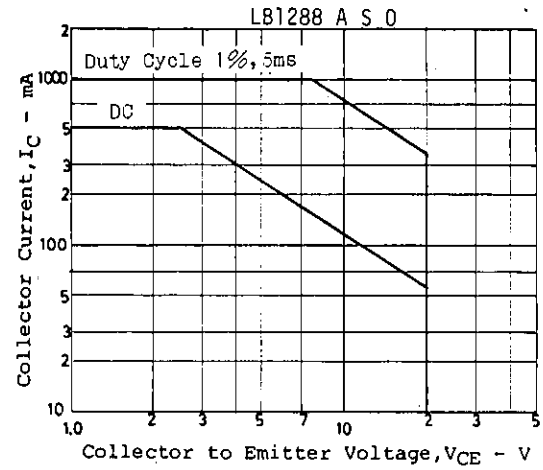
Test Circuit











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