

High Voltage Medium Current Driver Arrays

Description

The SG2800 series integrates eight NPN Darlington pairs with internal suppression diodes to drive lamps, relays, and solenoids in many military, aerospace, and industrial applications that require severe environments.

All units feature open collector outputs with greater than 50V breakdown voltages combined with 500mA current carrying capabilities.

Five different input configurations provide optimized designs for interfacing with DTL, TTL, PMOS, or CMOS drive signals.

These Darlington array are designed to operate from -55°C to 125°C ambient temperature in a 18pin dual in-line ceramic (J) package and 20-pin leadless chip carrier (LCC).

In addition a plastic version is available in 18 lead SOWB (DW) package with a reduced temperature range of 0° C to 70° C.

Features

- Eight NPN Darlington Pairs
- Collector Currents to 600mA
- Output Voltages from 50V to 95V
- Internal Clamping Diodes for Inductive loads
- DTL, TTL, PMOS, or CMOS Compatible inputs

High Reliability Features

- Available To MIL-STD-883 883, ¶ 1.2.1
- Available to DSCC

 Standard Microcircuit Drawing (SMD)
- MIL-M38510/14106BVA SG2801J-JAN
- MIL-M38510/14107BVA SG2802J-JAN
- MIL-M38510/14108BVA SG2803J-JAN
- MIL-M38510/14109BVA SG2804J-JAN
- MSC-AMS Level "S" Processing Available

Schematics (each Darlington pair)

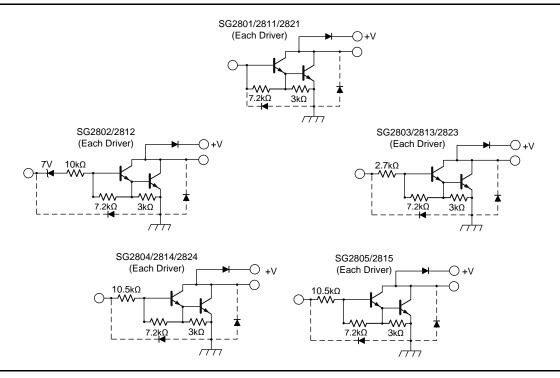


Figure 1 - Schematics (showing each Darlington pair)

Connection Diagrams and Ordering Information

Ambient Temperature	Туре	Package	Part Number	Packaging Type	Connection Diagram
			SG28XXJ-883B		
			SG2801J-JAN		
			SG2802J-JAN		
			SG2803J-JAN		
-55°C to 125°C	J	18-Pin Ceramic DIP	SG2804J-JAN	CERDIP	
-55 C to 125 C	Ū	Package	SG2803J-DESC	CERDIP	
			SG2821J-DESC		
			SG2823J-DESC		
			SG2824J-DESC		
			SG28XXJ		
0°C to 70°C	DW	18-Pin Plastic SOIC Package	SG2803DW	SOWB	DW Package: RoHS Compliant / Pb- free Transition DC: 0516 Pinout same as J package DW Package: RoHS / Pb-free 100% Matte Tin Lead Finish
			SG28XXL-883B		3 2 1 20 19
			SG2803L-DESC		
		20-Pin	SG2821L-DESC		
-55°C to 125°C	L	Ceramic	SG2823L-DESC	CLCC	
		Leadless Chip Carrier	SG2824L-DESC	0100	
			SG28XXL		9 10 11 12 13
Note:					

1. Contact factory for JAN and DESC product availability.

2. All parts are viewed from the top.

3. See Selection Guide for specific device types.

4. Hermetic Packages J, L use Pb37/Sn63 hot solder lead finish, contact factory for availability of RoHS versions.

Absolute Maximum Ratings¹

Parameter	Value	Units
Output Voltage, V _{CE} (SG2800, 2810 series)	50	V
(SG2820 series)	95	V
Input Voltage, V _™ (SG2802,3,4 series)	30	V
Continuous Input Current, IIN	25	mA
Continuous Collector Current, IC (SG2800, 2820)	500	mA
(SG2810)	600	mA
Operating Junction Temperature		
Plastic (DW Package)	150	°C
Hermetic (J, L Packages)	150	°C
Storage Temperature Range	-65 to 150	۵°
Lead Temperature (Soldering 10 sec.)	300	°C
RoHS Peak Package Solder Reflow Temperature (40 sec. max. exp.)	260 (+0, -5)	°C
Note: 1. Exceeding these ratings could cause damage to the device. Al Currents are positive into, negative out of specified terminal.	I voltages are with resp	ect to ground.

Thermal Data

Parameter	Value	Units
J Package		
Thermal Resistance-Junction to Case, θ_{JC}	25	°C/W
Thermal Resistance-Junction to Ambient, θ_{JA}	70	°C/W
L Package		
Thermal Resistance-Junction to Case, θ_{JC}	35	°C/W
Thermal Resistance-Junction to Ambient, θ_{JA}	120	°C/W
DW Package		
Thermal Resistance-Junction to Ambient, θ_{JA}	90	°C/W

Note:

1. Junction Temperature Calculation: $T_J = T_A + (P_D x \theta_{JA})$.

2. The above numbers for θ_{JC} are maximums for the limiting thermal resistance of the package in a standard mounting configuration. The θ_{JA} numbers are meant to be guidelines for the thermal performance of the device/pcboard system. All of the above assume no ambient airflow.

Recommended Operating Conditions¹

Symbol	Parameter	Recommende	Units		
Symbol	Farameter	Min.	Тур.	Max.	Units
	Output Voltage				
V _{CE} SG2800, SG2820 series				50	V
	SG2810 series			95	V
	Peak Collector Current, Ic				
I _C	SG2800, SG2820 series			350	mA
	SG2810 series			500	mA
Operating	Ambient Temperature Range:				
	J, L Packages	-55		125	°C
	DW Packages	0		70	°C

Selection Guide

Device	Vce Max	lc Max	Logic Inputs
SG2801			General Purpose PMOS, CMOS
SG2802		500mA	14V-25V PMOS
SG2803		30011A	5V TTL, CMOS
SG2804			6V-15V CMOS, PMOS
SG2811	50V		General Purpose PMOS, CMOS
SG2812			14V-25V PMOS
SG2813		600mA	5V TTL, CMOS
SG2814			6V-15V CMOS, PMOS
SG2815			High Output TTL
SG2821			General Purpose PMOS, CMOS
SG2823	95V	500mA	5V TTL, CMOS
SG2824			6V-15V CMOS, PMOS



Electrical Characteristics

(Unless otherwise specified, these specifications apply over the operating ambient temperatures of -55°C \leq T_A \leq 125°C, for the J & L devices and 0°C \leq T_A \leq 70°C, for the DW device. Low duty cycle pulse testing techniques are used which maintains junction and case temperatures equal to the ambient temperature.)

		Applicable	Tama	Test Conditions		Limits		Units
Symbol	Parameter	Devices	Temp.	Test Conditions	Min	Туре	Мах	Units
lory	Output Leakage Current (Figure 2a)	All		$V_{CE} = 50V$			100	μA
I _{CEX}	Output Leakage	SG2802		$V_{CE} = 50V, \ V_{IN} = 6V$			500	μA
	Current (Figure 2b)	SG2804		$V_{CE} = 50V, V_{IN} = 1V$			500	μA
			$T_A = T_{MIN}$	I _C = 350mA, I _B = 850μA		1.6	1.8	V
			$T_A = T_{MIN}$	$I_{\rm C} = 200 {\rm mA}, I_{\rm B} = 550 {\rm \mu A}$		1.3	1.5	V
			$T_A = T_{MIN}$	$I_{\rm C} = 100 {\rm mA}, I_{\rm B} = 350 {\rm \mu A}$		1.1	1.3	V
	Collector – Emitter		$T_A = 25^{\circ}C$	$I_{\rm C} = 350 {\rm mA}, I_{\rm B} = 500 {\rm \mu A}$		1.25	1.6	V
V _{CE(SAT)}	(V _{CE(SAT)}	All	$T_A = 25^{\circ}C$	$I_{\rm C} = 200 {\rm mA}, I_{\rm B} = 350 {\rm \mu A}$		1.1	1.3	V
	(Figure 3)		$T_A = 25^{\circ}C$	$I_{C} = 100 \text{mA}, I_{B} = 250 \mu \text{A}$		0.9	1.1	V
	(ga. e e)		$T_A = T_{MAX}$	$I_{C} = 350 \text{mA}, I_{B} = 500 \mu \text{A}$		1.6	1.8	V
			$T_A = T_{MAX}$	$I_{C} = 200 \text{mA}, I_{B} = 350 \mu \text{A}$		1.3	1.5	V
			$T_A = T_{MAX}$	$I_{C} = 100 \text{mA}, I_{B} = 250 \mu \text{A}$		1.1	1.3	V
		SG2802		V _{IN} = 17V	480	850	1300	μA
	Input Current	SG2803		V _{IN} = 3.85V	650	930	1350	μA
I _{IN(ON)}	(Figure 4)	000004		$V_{IN} = 5V$	240	350	500	μA
		SG2804		V _{IN} = 12V	650	1000	1450	μA
I _{IN(OFF)}	Input Current (Figure 5)	All	$T_A = T_{MAX}$	I _C = 500μA	25	50		μA
		600800	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 300 \text{mA}$			18	V
		SG2802	$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 300mA$			13	V
			$T_{A} = T_{MIN}$	$V_{CE} = 2V, I_{C} = 200mA$			3.3	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 250mA$			3.6	V
		SG2803	$T_A=T_MIN$	$V_{CE} = 2V$, $I_C = 300mA$			3.9	V
		362003	$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 200 \text{mA}$			2.4	V
			$T_A = T_{MAX}$	$V_{CE} = 2V$, $I_C = 250mA$			2.7	V
V _{IN(ON)}	Input Voltage		$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 300 \text{mA}$			3.0	V
V IN(ON)	(Figure 6)		$T_A=T_MIN$	$V_{CE} = 2V, I_{C} = 125mA$			6.0	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 200mA$			8.0	V
			$T_A = T_{MIN}$	V_{CE} = 2V, I_C = 275mA			10	V
		SG2804	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 350mA$			12	V
		002004	$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 125mA$			5.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 200mA$			6.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 275mA$			7.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 350mA$			8.0	V

Table 1 · SG2801 thru SG2804



High Voltage Medium Current Mode PWM Controllerent Driver Array

Ourseland	Demonster	Applicable	Tamm	Test Conditions	Limits			Unito	
Symbol	Parameter	Devices	Temp.	Test Conditions	Min	Туре	Max	Units	
	D-C Forward	000004	$T_A = T_MIN$	$V_{CE} = 2V, I_{C} = 350mA$	500				
h _{FE}	Current Transfer Ratio (Figure 3)	SG2801	$T_A = 25^{\circ}C$	$V_{CE} = 2V, I_{C} = 350mA$	1000				
C _{IN}	Input Capacitance ¹		$T_A = 25^{\circ}C$			15	25	pF	
TPLH	Turn-On Delay		$T_A = 25^{\circ}C$	0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns	
TPHL	Turn-Off Delay		$T_A = 25^{\circ}C$	0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns	
I _R	Clamp Diode Leakage Current (Figure 7)	All		V _R = 50V			50	μA	
V _F	Clamp Diode Forward Voltage (Figure 8)			I _F = 350mA		1.7	2.0	V	
Note: ¹ T	his parameter, altho	ugh guarantee	ed, are not te	sted in production.	•	•		•	

Table 2 - SG2811 thru SG2815

		Applicable	-	Test One little set	Limits			- Units
Symbol	Parameter	Devices	Temp.	mp. Test Conditions		Туре	Мах	Units
	Output Leakage Current (Figure 2a)	All		V _{CE} = 50V			100	μA
ICEX	Output Leakage Current	SG2812		$V_{CE} = 50V, V_{IN} = 6V$			500	μA
	(Figure 2b)	SG2814		$V_{CE} = 50V, V_{IN} = 1V$			500	μA
			$T_A = T_{MIN}$	$I_{C} = 500 \text{mA}, I_{B} = 1100 \mu \text{A}$		1.8	1.1	V
		All	$T_A = T_{MIN}$	I _C = 350mA, I _B = 850μA		1.6	1.8	V
			$T_A = T_{MIN}$	$I_{C} = 200 \text{mA}, I_{B} = 550 \mu \text{A}$		1.3	1.5	V
	Collector –		T _A = 25°C	$I_{C} = 500 \text{mA}, I_{B} = 600 \mu \text{A}$		1.7	1.9	V
V _{CE(SAT)} Emitter	(V _{CE(SAT)}		T _A = 25°C	I _C = 350mA, I _B = 500μA		1.25	1.6	V
	(Figure 3)		T _A = 25°C	$I_{C} = 200 \text{mA}, I_{B} = 350 \mu \text{A}$		1.1	1.3	V
			$T_A = T_{MAX}$	$I_{C} = 500 \text{mA}, I_{B} = 600 \mu \text{A}$		1.8	2.1	V
			$T_A = T_{MAX}$	I _C = 350mA, I _B = 500μA		1.6	1.8	V
			$T_A = T_{MAX}$	I _C = 200mA, I _B = 350μA		1.3	1.5	V
		SG2812		V _{IN} = 17V	480	850	1300	μA
		SG2813		V _{IN} = 3.85V	650	930	1350	μA
I _{IN(ON)}	Input Current (Figure 4)	SG2814		$V_{IN} = 5V$	240	350	500	μA
(i igure +)	(1.19010-1)	362014		V _{IN} = 12V	650	1000	1450	μA
		SG2815		V _{IN} = 3V	1180	1500	2400	μA
I _{IN(OFF)}	Input Current (Figure 5)	All	$T_A = T_{MAX}$	I _C = 500μA	25	50		μA
Maria	Input Voltage	SG2812	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 500mA$			23.5	V
V _{IN(ON)}	(Figure 6)	302012	$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 500 \text{mA}$			17	V



0	Descention	Applicable	Tama	Toot Conditions	Limits			
Symbol	Parameter	Devices	Temp. Test Conditions	Min	Туре	Мах	Units	
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 250mA$			3.6	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 300mA$			3.9	V
		SG2813	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 500mA$			6.0	V
		5G2813	$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 250mA$			2.7	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 300mA$			3.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 500mA$			3.5	V
	Input Voltage		$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 275mA$			10	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_C = 350mA$			12	V
$V_{\text{IN}(\text{ON})}$	(Figure 6)	SG2814	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 500mA$			17	V
	(),),	362014	$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 275mA$			7.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 350mA$			8.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 500mA$			9.5	V
		SG2815	$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 350mA$			3.0	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 500mA$			3.5	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 350mA$			2.4	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, \ I_C = 500 mA$			2.6	V
h	D-C Forward	800911	$T_A = T_{MIN}$	$V_{CE} = 2V$, $I_C = 500mA$	450			
h _{FE}	Current Transfer Ratio (Figure 3)	SG2811	$T_A = 25^{\circ}C$	$V_{CE} = 2V$, $I_C = 500mA$	900			
C _{IN}	Input Capacitance ¹		$T_A = 25^{\circ}C$			15	25	pF
TPLH	Turn-On Delay		$T_A = 25^{\circ}C$	0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns
TPHL	Turn-Off Delay		$T_A = 25^{\circ}C$	0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns
I _R	Clamp Diode Leakage Current (Figure 7)	All		V _R = 50V			50	μA
	Clamp Diode			I _F = 350mA		1.7	2.0	V
VF	Forward Voltage (Figure 8)			I _F = 500mA			2.5	V

Table 3 - SG2821 thru SG2824

Cumb al	Deservator	ter Applicable Temp. Test Conditions	Tomp	Toot Conditions	Limits			Units
Symbol	Parameter		Min	Туре	Мах	Units		
	Output Leakage Current (Figure 2a)	All		V _{CE} = 95V			100	μA
I _{CEX}	Output Leakage Current (Figure 2b)	SG2824		$V_{CE} = 95V, V_{IN} = 1V$			500	μA



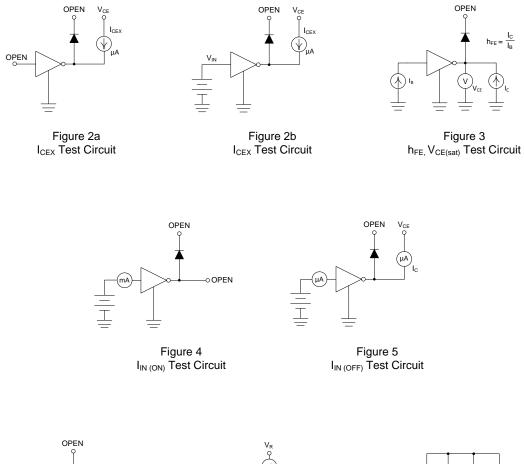
High Voltage Medium Current Mode PWM Controllerent Driver Array

Symbol	Baramatar	Applicable	Tomm	Test Conditions		Limits		Units
Symbol	Parameter	Devices	Temp.	Test Conditions	Min	Туре	Max	Units
			$T_A = T_{MIN}$	$I_{C} = 350 \text{mA}, I_{B} = 850 \mu \text{A}$		1.6	1.8	V
			$T_A = T_{MIN}$	$I_{C} = 200 \text{mA}, I_{B} = 550 \mu \text{A}$		1.3	1.5	V
			$T_A = T_{MIN}$	$I_{\rm C} = 100 {\rm mA}, I_{\rm B} = 350 {\rm \mu A}$		1.1	1.3	V
	Collector –		$T_A = 25^{\circ}C$	$I_{\rm C} = 350 {\rm mA}, I_{\rm B} = 500 {\rm \mu A}$		1.25	1.6	V
V _{CE(SAT)}	Emitter (V _{CE(SAT)}	All	$T_A = 25^{\circ}C$	$I_{\rm C} = 200 {\rm mA}, I_{\rm B} = 350 {\rm \mu A}$		1.1	1.3	V
	(Figure 3)		T _A = 25°C	$I_{\rm C} = 100 {\rm mA}, I_{\rm B} = 250 {\rm \mu A}$		0.9	1.1	V
			$T_A = T_{MAX}$	I _C = 350mA, I _B = 500μA		1.6	1.8	V
			$T_A = T_{MAX}$	$I_{\rm C} = 200 {\rm mA}, I_{\rm B} = 350 {\rm \mu A}$		1.3	1.5	V
			$T_A = T_{MAX}$	$I_{C} = 100 \text{mA}, I_{B} = 250 \mu \text{A}$		1.1	1.3	V
		SG2823		V _{IN} = 3.85V	650	930	1350	μA
I _{IN(ON)}	Input Current (Figure 4)	000004		$V_{IN} = 5V$	240	350	500	μA
	(Figure 4)	SG2824		V _{IN} = 12V	650	1000	1450	μA
I _{IN(OFF)}	Input Current (Figure 5)	All	$T_A = T_{MAX}$	I _C = 500μA	25	50		μA
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 200 \text{mA}$			3.3	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 250mA$			3.6	V
		SG2823	$T_A = T_{MIN}$	$V_{CE} = 2V, I_C = 300mA$			3.9	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 200mA$			2.4	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 250mA$			2.7	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 300 \text{mA}$			3.0	V
	, Input Voltage		$T_A = T_{MIN}$	$V_{CE} = 2V, I_C = 125mA$			6.0	V
V _{IN(ON)}	(Figure 6)		$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 200 \text{mA}$			8.0	V
			$T_A = T_{MIN}$	$V_{CE} = 2V, I_{C} = 275mA$			10	V
		000004	$T_A = T_{MIN}$	$V_{CE} = 2V, I_C = 350mA$			12	V
		SG2824	$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 125mA$			5.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 200mA$			6.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_{C} = 275mA$			7.0	V
			$T_A = T_{MAX}$	$V_{CE} = 2V, I_C = 350mA$			8.0	V
h _{FE}	D-C Forward Current	SG2821	$T_A = T_{MIN}$	$V_{CE} = 2V, I_C = 350 \text{mA}$	500			
IIFE	Transfer Ratio (Figure 3)	562021	$T_A = 25^{\circ}C$	$V_{CE} = 2V$, $I_C = 350mA$	1000			
C _{IN}	Input Capacitance ¹	-	T 0500			15	25	pF
TPLH	Turn-On Delay		$T_A = 25^{\circ}C$	0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns
TPHL	Turn-Off Delay	-		0.5 E _{IN} to 0.5 E _{OUT}		250	1000	ns
I _R	Clamp Diode Leakage Current (Figure 7)	All		V _R = 95V			50	μA
V _F	Clamp Diode Forward Voltage (Figure 8)			I _F = 350mA		1.7	2.0	V
Note: 1Th	nis parameter, altho	ugh guarantee	d, are not test	ed in production.				



Parameter Test Figures

(See figure numbers in Electrical Characteristics Tables 1 to 3)



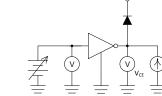


Figure 6 V_{IN(ON)} Test Circuit

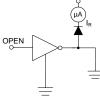


Figure 7 I_R Test Circuit

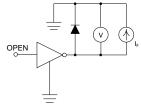


Figure 8 V_F Test Circuit

Characteristic Curves

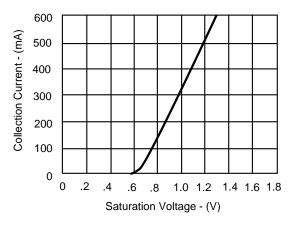


Figure 8 · Output Characteristics

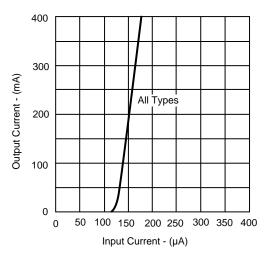


Figure 10 • Output Current Vs. Input Current

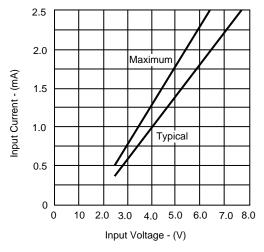


Figure 12 · Input Characteristics - SG2803

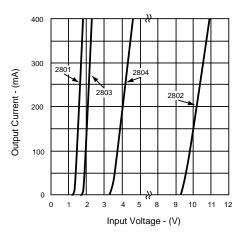


Figure 9 - Output Current Vs. Input Voltage

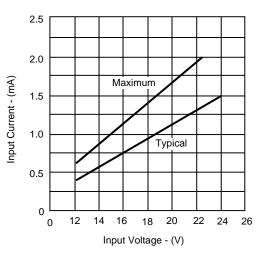


Figure 11 - Input Characteristics - SG2802

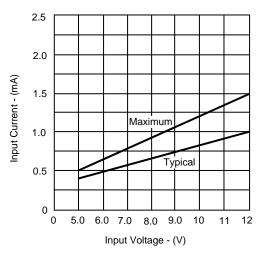


Figure 13 · Input Characteristics - SG2804



Characteristic Curves - Continued

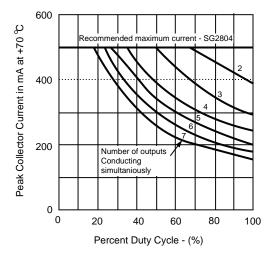


Figure 14 - Peak Collector Current Vs. Duty Cycle

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High Voltage Medium Current Mode PWM Controllerent Driver Array

Package Outline Dimensions

Controlling dimensions are in inches, metric equivalents are shown for general information.

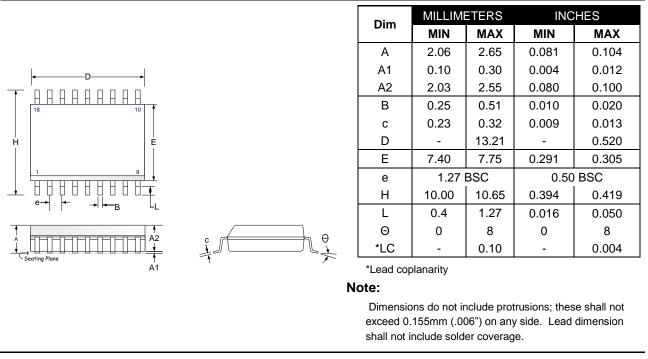
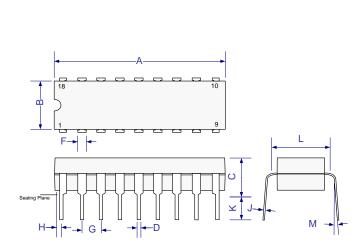


Figure 15 · DW Package Dimensions



Package Outline Dimensions

Controlling dimensions are in inches, metric equivalents are shown for general information.

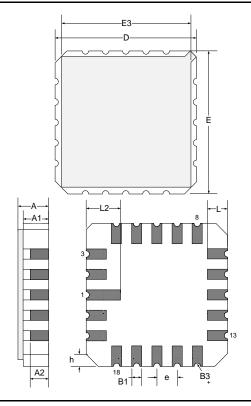


	MILLIM	ETERS	INCHES		
Dim	MIN	MAX	MIN	MAX	
А	-	24.38	-	0.960	
В	5.59	7.11	0.220	0.280	
С	-	5.08	-	0.200	
D	0.38	0.51	0.015	0.020	
F	1.02	1.77	0.040	0.070	
G	2.54	BSC	0.100 BSC		
Н	-	2.03	-	0.080	
J	0.20	0.38	0.008	0.015	
К	3.18	5.08	0.125	0.200	
L	7.37	7.87	0.290	0.310	
М	-	15°	-	15°	

Note:

Dimensions do not include protrusions; these shall not exceed 0.155mm (.006") on any side. Lead dimension shall not include solder coverage.

Figure 16 - J 18-Pin Ceramic Dual Inline Package Dimensions



Dim	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D/E	8.64	9.14	0.340	0.360
E3	-	8.128	-	0.320
е	1.270 BSC		0.050 BSC	
B1	0.635 TYP		0.025 TYP	
L	1.02	1.52	0.040	0.060
А	1.626	2.286	0.064	0.090
h	1.016 TYP		0.040 TYP	
A1	1.372	1.68	0.054	0.066
A2	-	1.168	-	0.046
L2	1.91	2.41	0.075	0.95
B3	0.203R		0.008R	

Note:

 All exposed metalized area shall be gold plated 60 micro-inch minimum thickness over nickel plated unless otherwise specified in purchase order.





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