

CURRENT REGULATOR DIODES

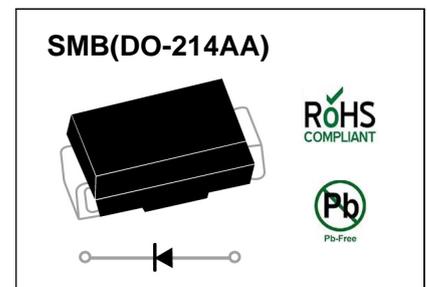
Pinch-off Current - 15 to 50 milliampere

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

- Case: DO-214AA molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.003 ounce, 0.093 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

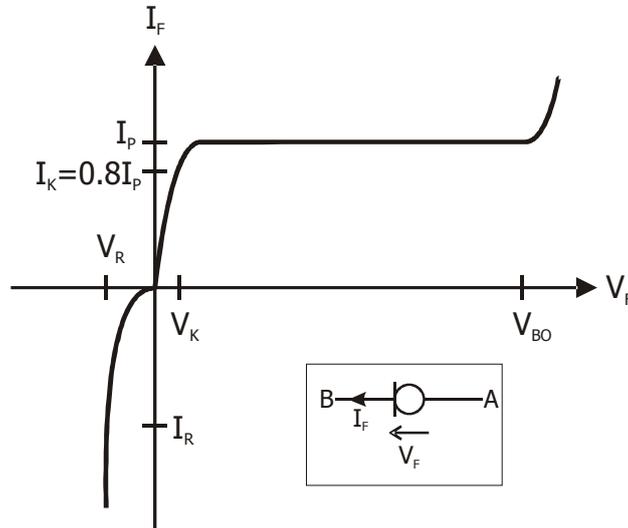
Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	S153	S183	S203	S253	S303	S353	S403	S503	UNITS
Regulator current at specified test	I_P	15	18	20	25	30	35	40	50	mA
Knee impedance test voltage at $I=0.8I_P$	V_K	3.0								VOLTS
Peak operating voltage	V_{BO}	100.0				90.0				VOLTS
A 90Hz signal V_K with RMS value equal to 10% of test voltage, V_K is superimposed on V_K : $R_K=V_K/I_K$	R_{DK}	10 to 300								Ohm
DC power	P_{tot}	1.0								Watt
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150								°C
Typical temperature coefficient	T_C	-0.23_-0.32				-0.23_-0.35				%/°C

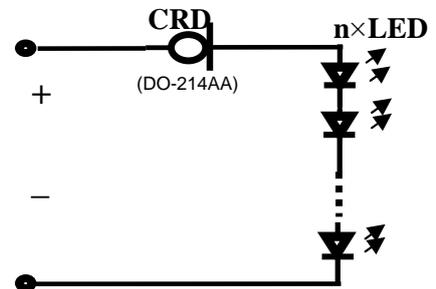
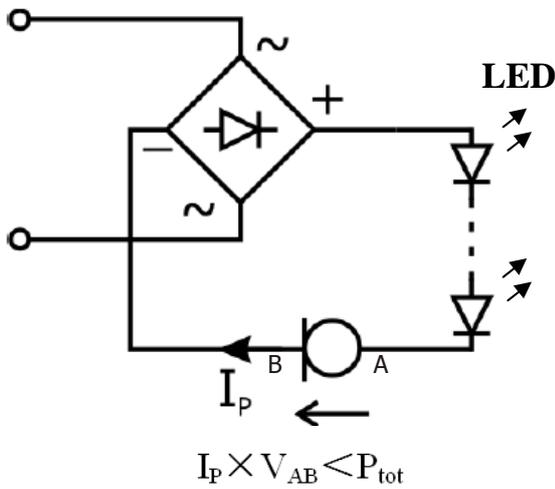
Note: 1. Field-effect current regulator diodes are circuit elements that provide a current essentially independent of voltage. These diodes are especially designed for maximum impedance over the operating range. These devices may be used in parallel to obtain higher currents.

2. Generally I_P indicate $\pm 10\%$ tolerance ; suffix "A" indicate $\pm 5\%$ tolerance.

Ratings and characteristic curves S153 thru S503



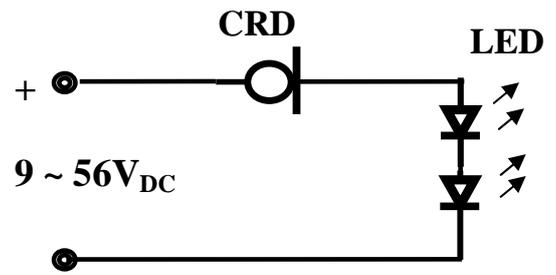
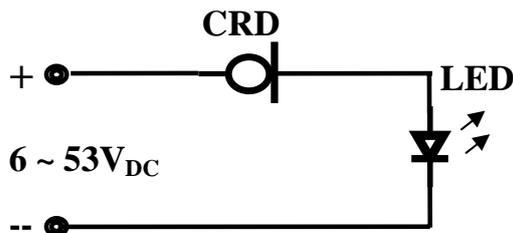
Application Example:



The best configuration of the LED quantity:

$$3(V) + n \times V_{(LED)} \sim 50(V) + n \times V_{(LED)DC}$$

(n : the number of LED; $V_{(LED)}$: the voltage difference of LED)



Marking and packing illustration

1、Marking



SYMBOL	Explanation
A	Product Name

2、Packaging



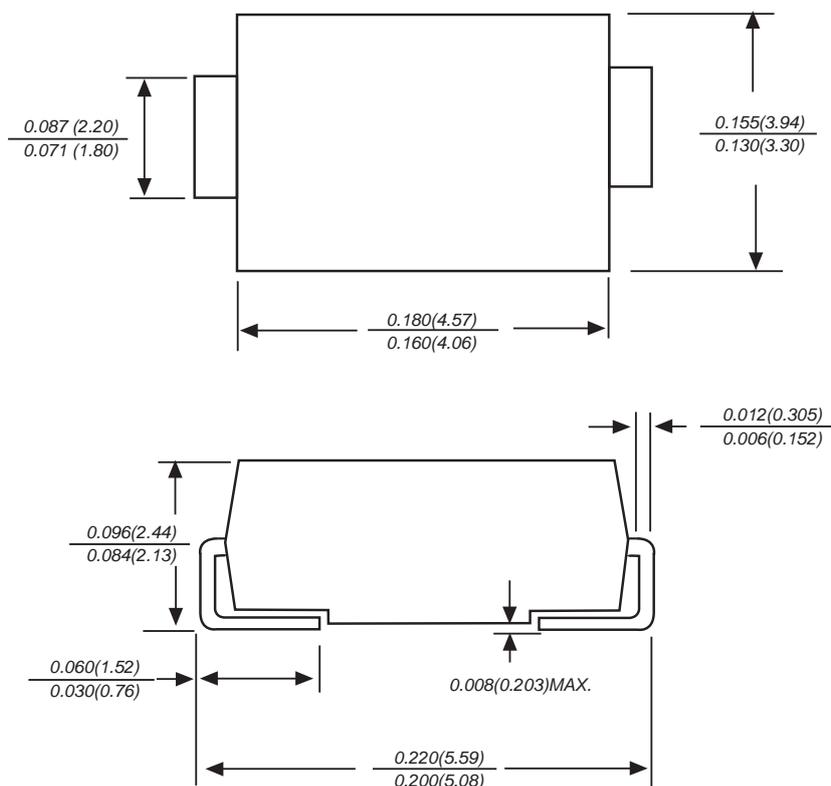
SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMB (DO-214AA)	ITEM	SYM BOL	SMB (DO-214AA)
Carrier width	A	3.81(0.150)Max	Carrier depth	K	2.45(0.965)Typ
Carrier length	B	5.41(0.213)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			

3、Ordering Information

Part Number	Compliance	Case	Packaging
SSXX	Standard	SMB	3000/Tape & Reel

Dimension

SMB(DO-214AA)



Dimensions in inches and (millimeters)

DISCLAIMER

JHG PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with JHG products. You are solely responsible for

- (1) selecting the appropriate JHG products for your application;
- (2) designing, validating and testing your application;
- (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements.

These resources are subject to change without notice. JHG grants you permission to use these resources only for development of an application that uses the JHG products described in the resource. Other reproduction and display of these resources are prohibited. No license is granted to any other JHG intellectual property right or to any third party intellectual property right. JHG disclaims responsibility for, and you will fully indemnify JHG and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.