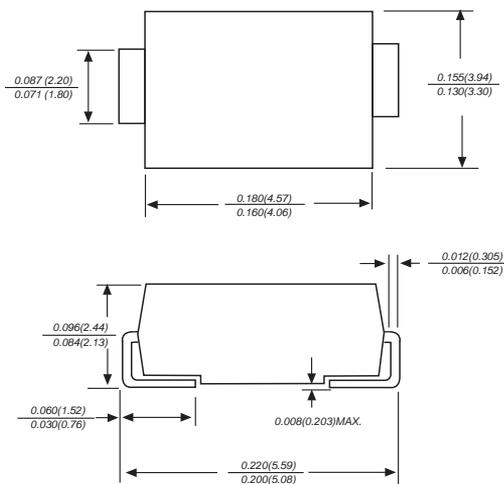


S153 THRU S503

CURRENT REGULATOR DIODES

Pinch-off Current - 15 to 50 milliampere

DO-214AA



Dimensions in inches and (millimeters)

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: JEDEC 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

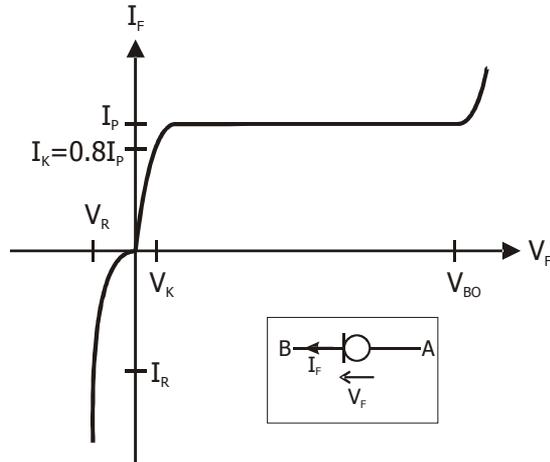
Ratings at 25°C ambient temperature unless otherwise specified.

	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

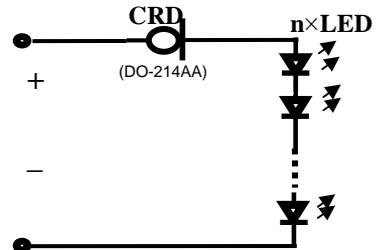
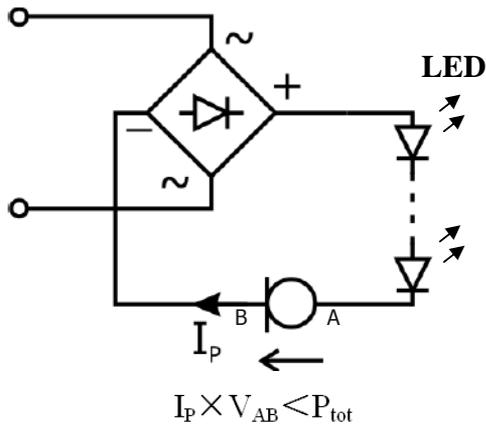
Note: 1. Field-effect current regulator diodes are circuit elements that provide a current essentially independent of voltage. These diodes are especially designed for maximum impedance over the operating range. These devices may be used in parallel to obtain higher currents.

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:
 $3(V) + n \times V(\text{LED}) \sim 50(V) + n \times V(\text{LED})_{DC}$
 (n : the number of LED; $V(\text{LED})$: the voltage difference of LED)

