

## SR540-HF Thru. SR5200-HF

Forward current: 5.0A  
Reverse voltage: 40 to 200V

RoHS Device  
Halogen Free

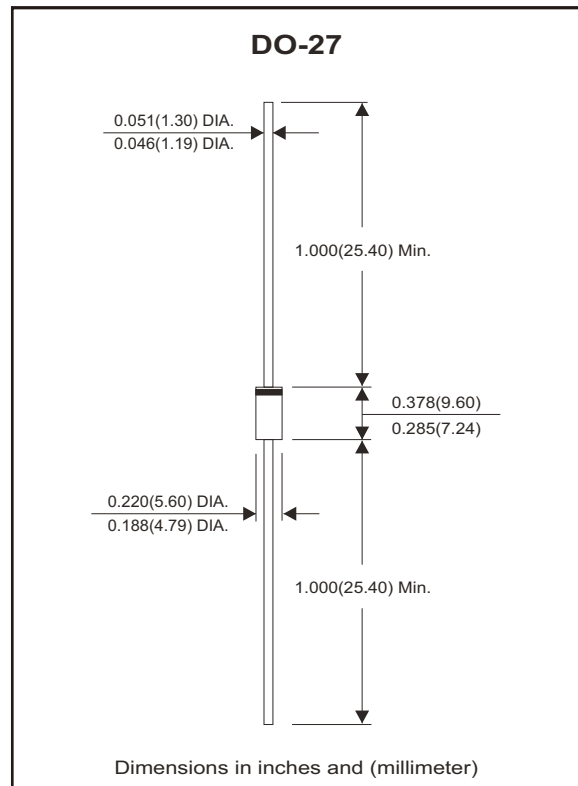


### Features

- Axial lead type devices for through hole design.
- Low power loss, high efficiency.
- High current capability, Low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free part meets environmental standards of MIL-STD-19500/228

### Mechanical Data

- Case: Molded plastic, DO-201AD/DO-27.
- Epoxy: UL94V-0 rate flame retardant.
- Lead: Axial lead, solderable per MIL-STD-202, Method 208 guaranteed.
- Polarity: color band denoted cathode end.
- Weight: 1.10 grams (approx.).



### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

Ratings at  $T_a=25^{\circ}\text{C}$  unless otherwise noted.  
Single phase, half wave, 60Hz, resistive or inductive loaded.  
For capacitive load, derate current by 20% .

Parameter	Symbol	SR540-HF	SR560-HF	SR5100-HF	SR5150-HF	SR5200-HF	Unit	
Maximum recurrent peak reverse voltage	$V_{RRM}$	40	60	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	28	42	70	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	40	60	100	150	200	V	
Maximum instantaneous forward voltage at $I_F=5A, T_A=25^{\circ}\text{C}$	$V_F$	0.55	0.75	0.81	0.87	0.90	V	
Typical diode junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	300						pF
Operating junction temperature range	$T_J$	-50 ~ +150			-50 ~ +175		$^{\circ}\text{C}$	

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward rectified current	See Fig.1	$I_o$			5.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			125	A
Reverse current	$V_R = V_{RRM} T_A=25^{\circ}\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} T_A=100^{\circ}\text{C}$	$I_R$			20	mA
Thermal resistance	Junction to ambient	$R_{\theta JA}$		24		$^{\circ}\text{C}/\text{W}$
Storage temperature range		$T_{STG}$	-50		+175	$^{\circ}\text{C}$

## Rating and Characteristic Curves (SR540-HF Thru. SR5200-HF)

Fig.1 - Typical Forward Current Derating Curve

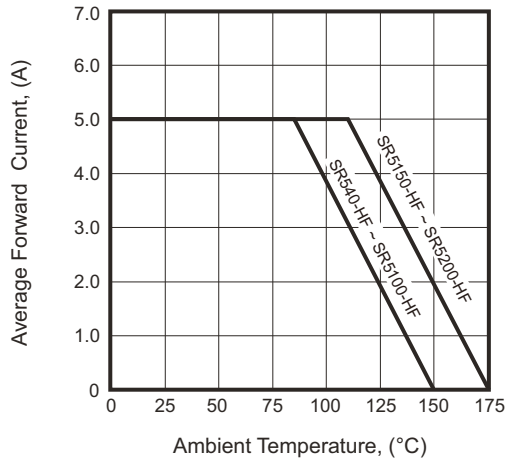


Fig.2 - Typical Forward Characteristics

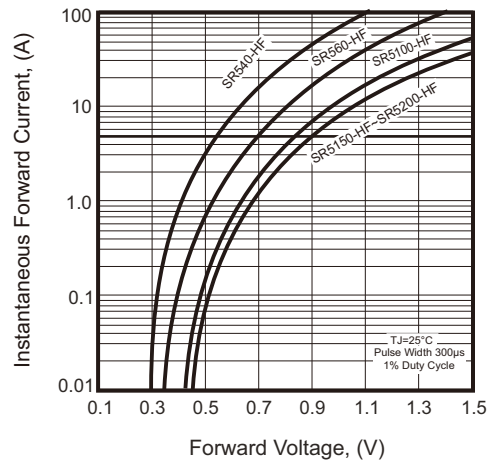


Fig.3 - Maximum Non-Repetitive Forward Surge Current

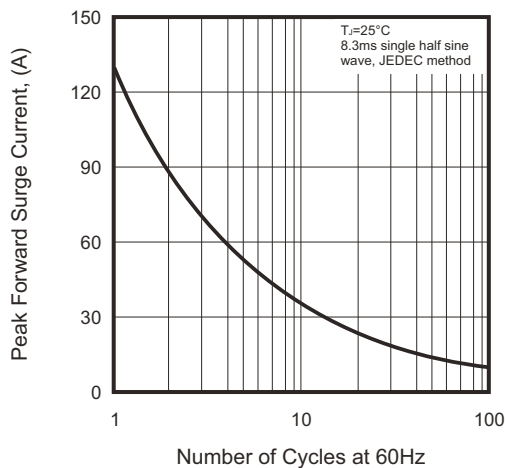


Fig.4 - Typical Junction Capacitance

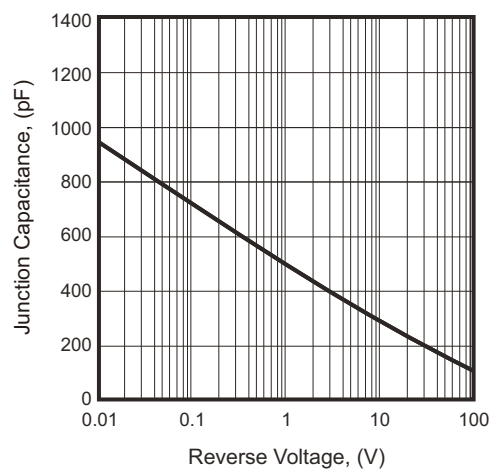


Fig.5 - Typical Reverse Characteristics

