

SR540-HF Thru. SR5200-HF

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

RoHS Device
Halogen Free

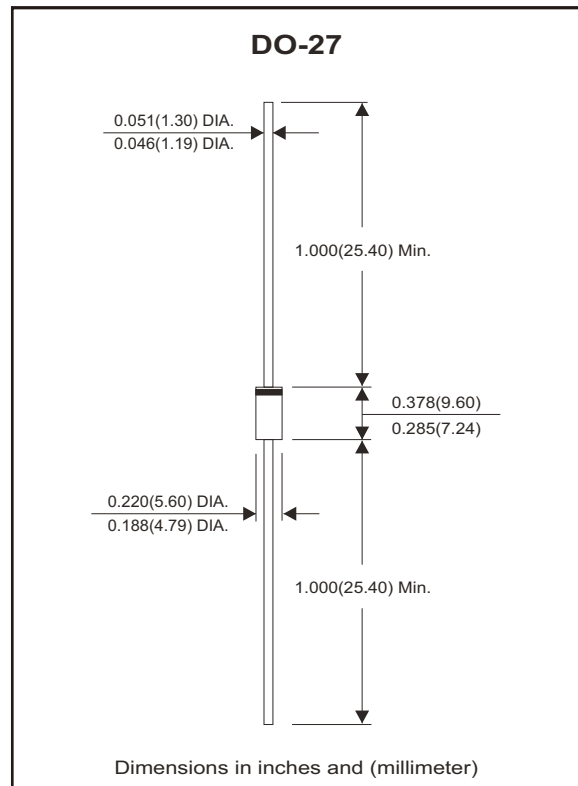


Features

- 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		$^\circ\text{C/W}$
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

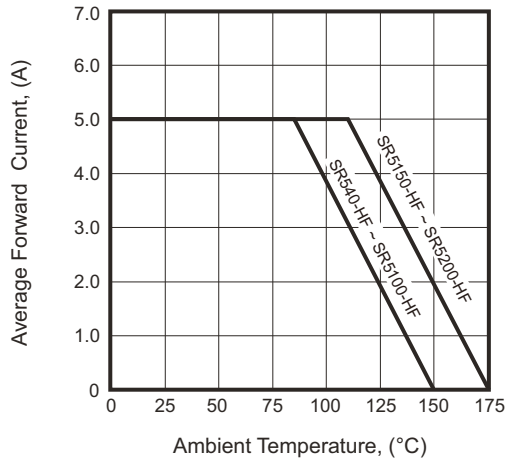


Fig.2 - Typical Forward Characteristics

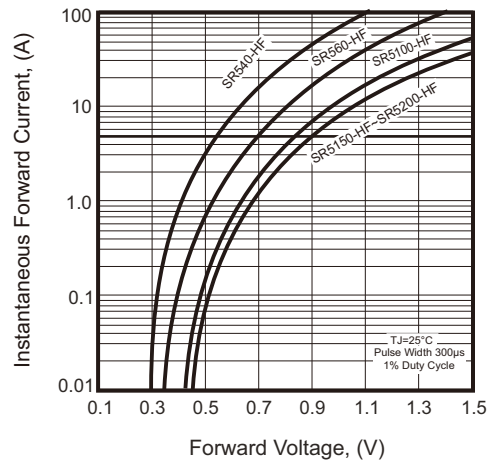


Fig.3 - Maximum Non-Repetitive Forward Surge Current

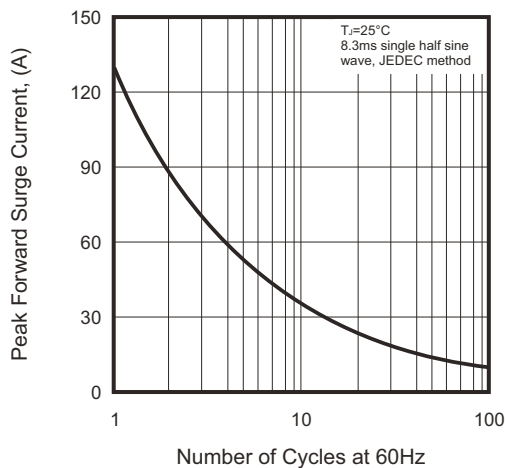


Fig.4 - Typical Junction Capacitance

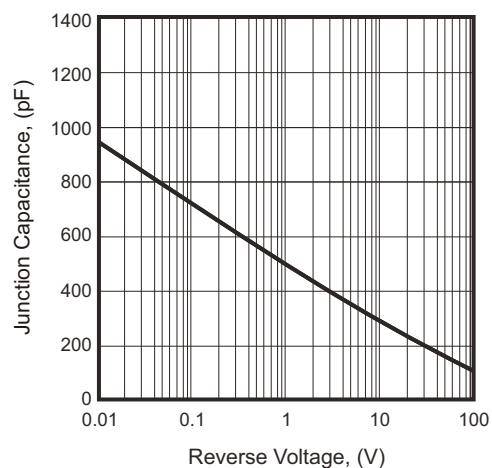


Fig.5 - Typical Reverse Characteristics

