

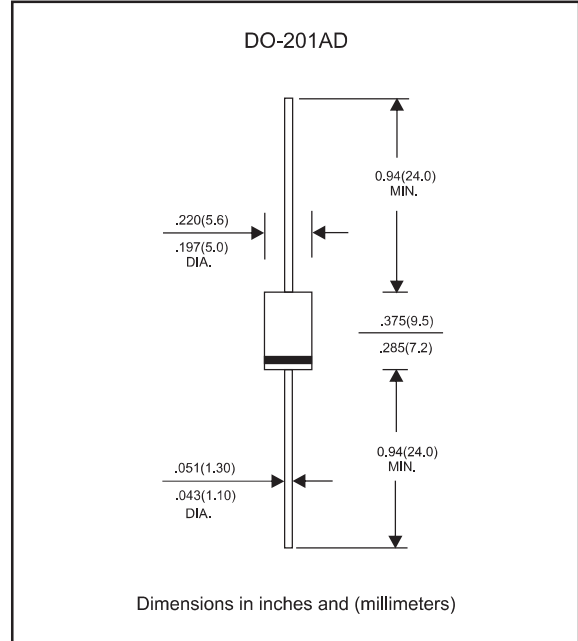
Features

- Axial lead type devices for through hole design
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" for Halogen-free part, ex.SR520-H

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

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 (JEDEC methode)	I_{FSM}			120	A
Reverse current	$T_J = 25^\circ\text{C}$	I_R			0.5	mA
					0.1	
Reverse current	$T_J = 100^\circ\text{C}$	I_R			10	mA
					5	
Thermal resistance	Junction to ambient Junction to lead	$R_{\theta JA}$ $R_{\theta JL}$		25		$^\circ\text{C/W}$ $^\circ\text{C/W}$
				10		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		380		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature $T_J, (^\circ\text{C})$
SR520	20	14	20	0.55	-55 to +125
SR540	40	28	40		
SR545	45	32	45		
SR550	50	35	50	0.70	-55 to +150
SR560	60	42	60		
SR580	80	56	80	0.85	
SR5100	100	70	100		
SR5150	150	105	150	0.92	
SR5200	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$

Rating and characteristic curves (SR520 THRU SR5200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

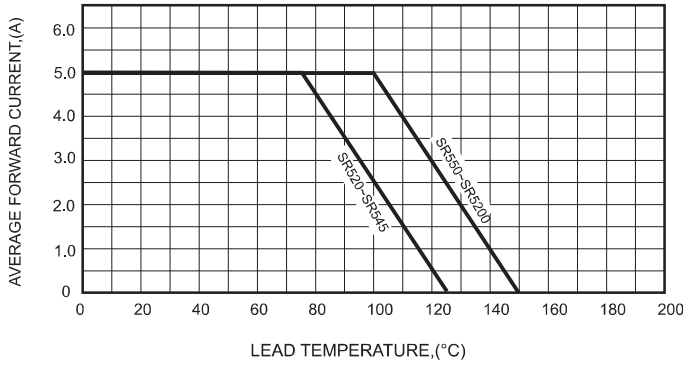


FIG.2-TYPICAL FORWARD CHARACTERISTICS

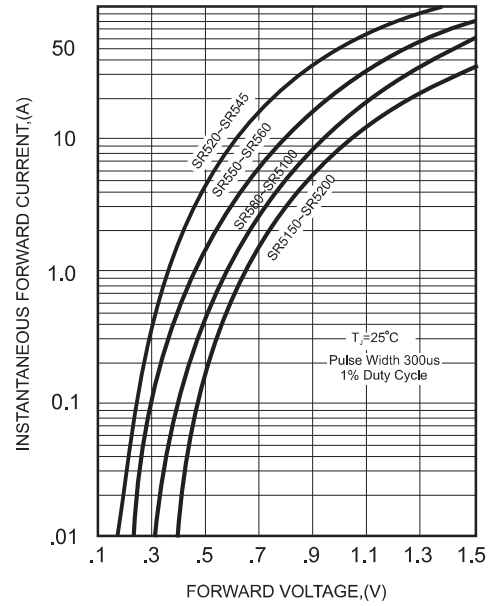


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

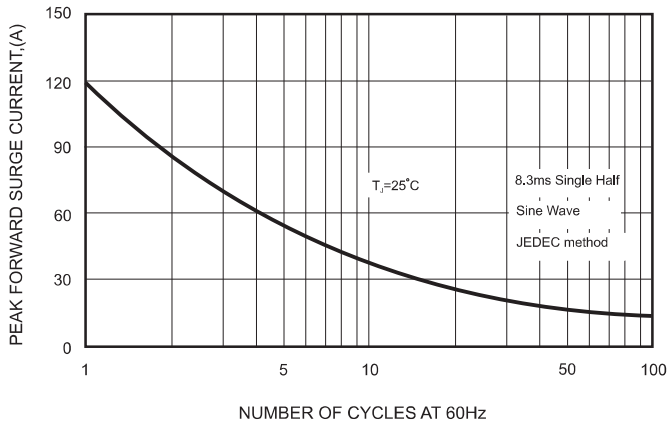


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

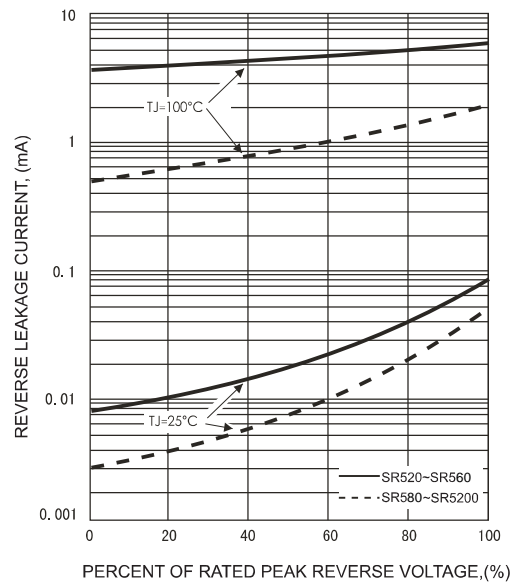
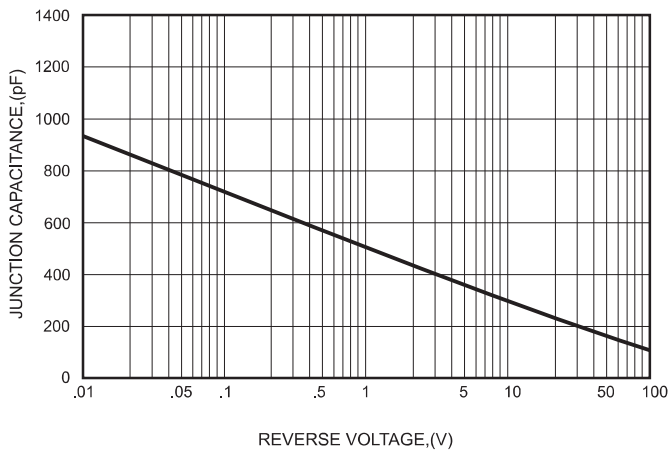




FIG.4-TYPICAL JUNCTION CAPACITANCE



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SR520	SR520
SR530	SR530
SR540	SR540
SR550	SR550
SR560	SR560
SR580	SR580
SR5100	SR5100
SR5150	SR5150
SR5200	SR5200