

### ■ Features

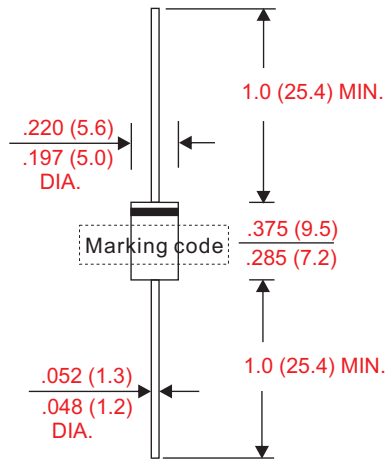
- Electrostatic discharge (ESD) test under IEC6100-4-2 standard >16KV(SR52~SR56). standard >10KV(SR510~SR520).
- Axial lead type devices for through hole design.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "G" indicates Halogen-free part, ex. SR52G.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD / DO-27
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 1.10 gram

### ■ Outline

DO-27(DO-201AD)



### ■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_j$		380		pF
Thermal resistance	Junction to ambient	$R_{BJA}$		24		°C/W
Storage temperature		$T_{STG}$	-55		+175	°C

Symbol	Marking code	Max. repetitive peak reverse voltage $V_{RRM}$ (V)	Max. RMS voltage $V_{RMS}$ (V)	Max. DC blocking voltage $V_R$ (V)	Max. forward voltage @5A, $T_A = 25^\circ\text{C}$ $V_F$ (V)	Operating temperature $T_J$ (°C)
SR52	SR52	20	14	20	0.50	-50 ~ +150
SR54	SR54	40	28	40	0.55	
SR56	SR56	60	42	60	0.75	
SR510	SR510	100	70	100	0.81	
SR515	SR515	150	105	150	0.87	-50 ~ +175
SR520	SR520	200	140	200	0.90	

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

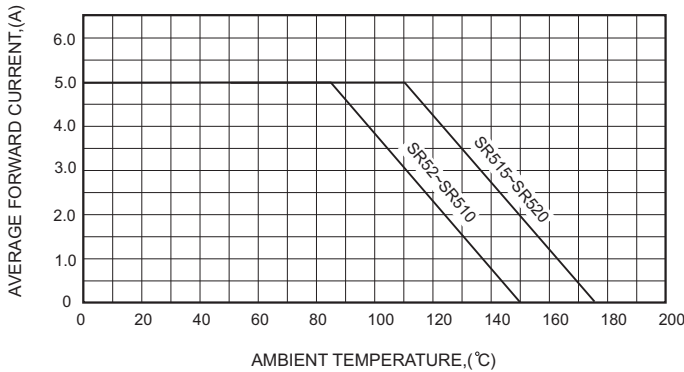


FIG.2-TYPICAL FORWARD CHARACTERISTICS

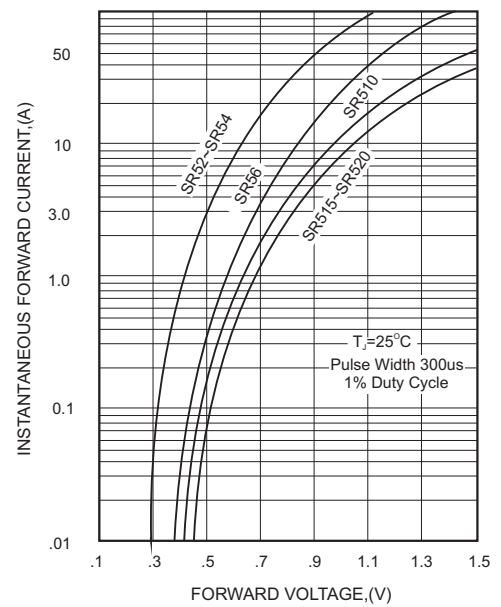


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

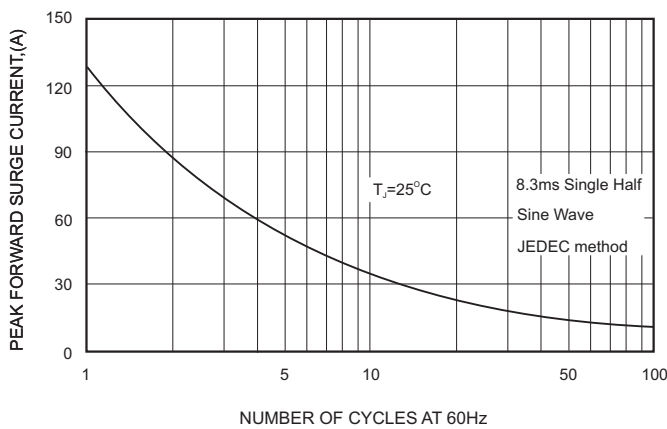


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

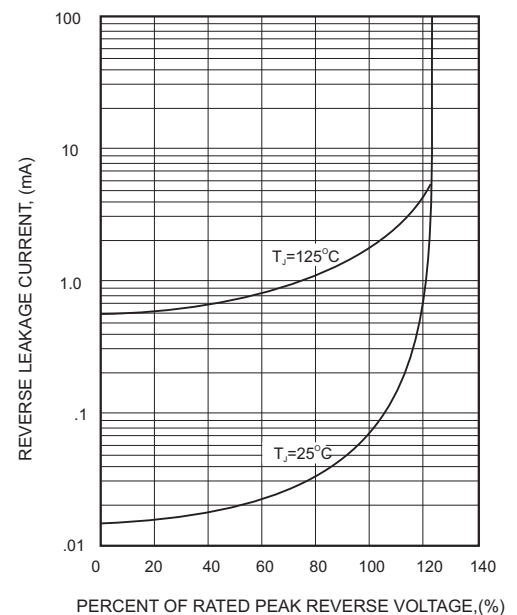
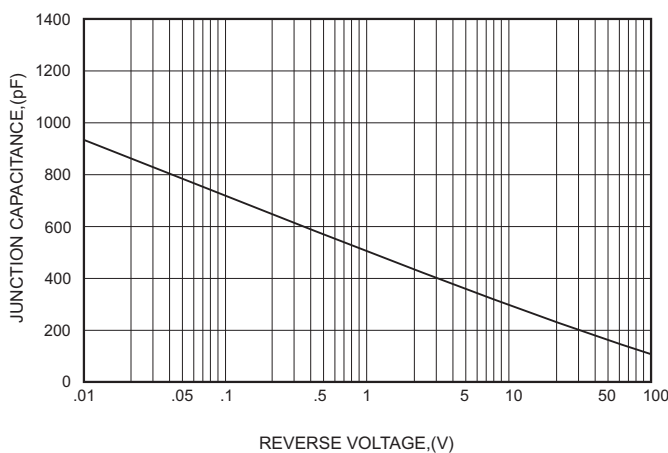


FIG.4-TYPICAL JUNCTION CAPACITANCE



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