

Main Product Characteristics

$I_{F(AV)}$	10A
V_{RRM}	45V
T_J	150°C
$V_{(Typ)}$	0.35V

■ Features

- Axial lead type devices for through hole design.
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSRS1045G-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

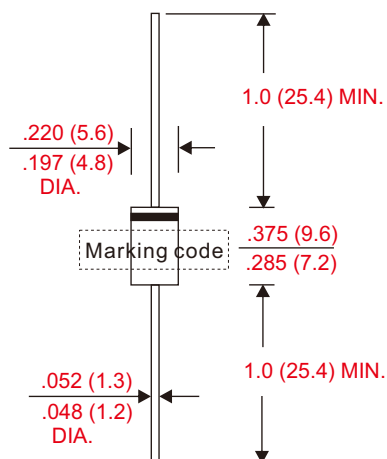
- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD / DO-27
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 1.10 gram

■ 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%.

■ Outline

DO-27(DO-201AD)



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	CSRS1045-A			UNIT
Marking code			CSRS1045			
Peak repetitive reverse voltage		V_{RRM}	45			V
Working peak reverse voltage		V_{RWM}				
DC blocking voltage		V_{RM}				
RMS reverse voltage		$V_{R(RMS)}$	32			A
Forward rectified current		I_O	10			A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	300			A
Non-repetitive avalanche energy	$T_J = 25^{\circ}\text{C}$, $I_{AS} = 20\text{A}$, $L = 8.5\text{mH}$	E_{AS}	20			mJ
Thermal resistance	Junction to case	$R_{\theta JC}$	4			$^{\circ}\text{C/W}$
Operating and Storage temperature		T_J , T_{STG}	-55 ~ +150			$^{\circ}\text{C}$
Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 0.5\text{mA}$	$V_{(BR)R}$	45			V
Forward voltage drop	$I_F = 8\text{A}$, $T_J = 25^{\circ}\text{C}$	V_F			420	mV
	$I_F = 10\text{A}$, $T_J = 25^{\circ}\text{C}$				470	
	$I_F = 10\text{A}$, $T_J = 125^{\circ}\text{C}$			350	410	
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	I_R			0.3	mA
	$V_R = V_{RRM}$ $T_J = 100^{\circ}\text{C}$				15	
	$V_R = V_{RRM}$ $T_J = 150^{\circ}\text{C}$				75	

■ Rating and characteristic curves

Fig. 1 - Instantaneous Forward Characteristics

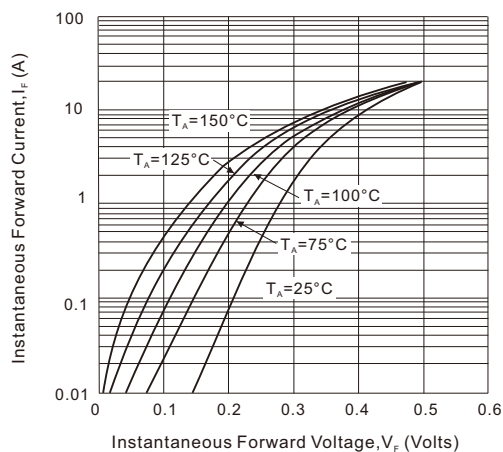


Fig. 2 - Reverse Characteristics

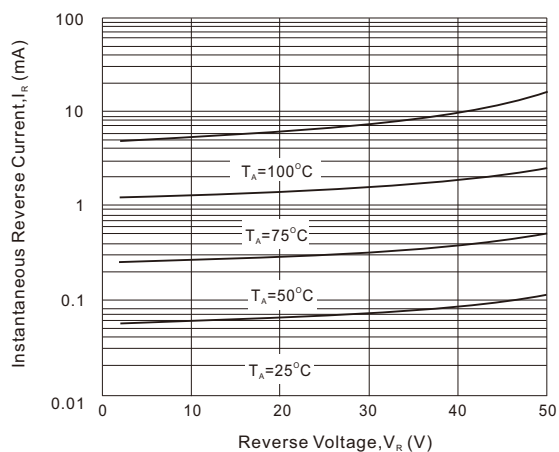


Fig. 3 - Total Capacitance VS. Reverse Voltage

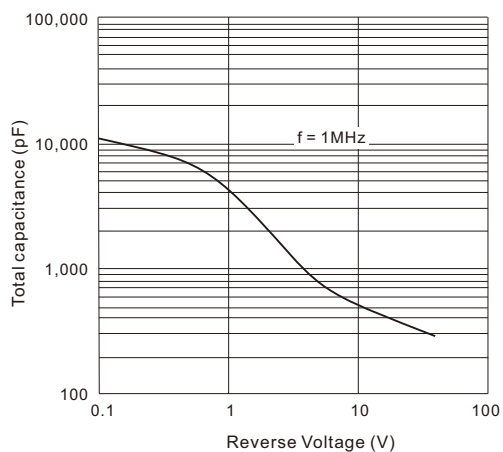
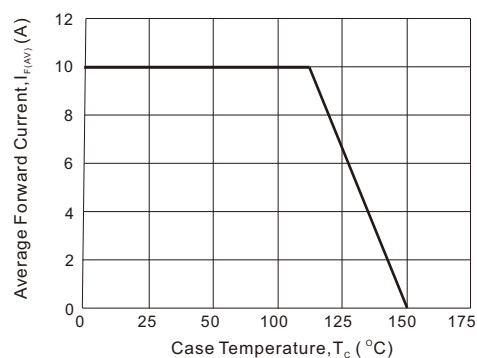


Fig.3 - Forward Current Derating Curve



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