

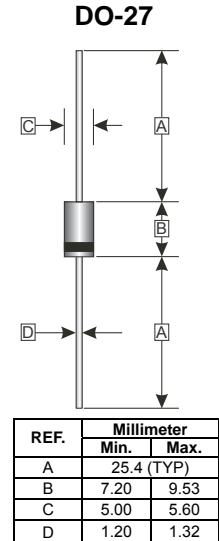
RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching

## PACKAGING INFORMATION

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 1.1050 grams (approximately)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Part Number					Unit	
		SF51	SF52	SF53	SF54	SF55		
Maximum Recurrent Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V	
Maximum Instantaneous Forward Voltage @ $I_F=5A$	$V_F$	0.95			1.3	1.7	V	
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length @ $T_L=55^\circ C$	$I_O$	5					A	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150					A	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ C$	$I_R$	5					$\mu A$
	$T_J=125^\circ C$		250					
Maximum Reverse Recovery Time <sup>1</sup>	$T_{RR}$	35					nS	
Typical Junction Capacitance <sup>2</sup>	$C_J$	100				65	pF	
Typical Thermal Resistance	$R_{\theta JA}$	20					$^\circ C / W$	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 ~ 150					$^\circ C$	

Note:

1.  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 - FORWARD CURRENT DERATING CURVE

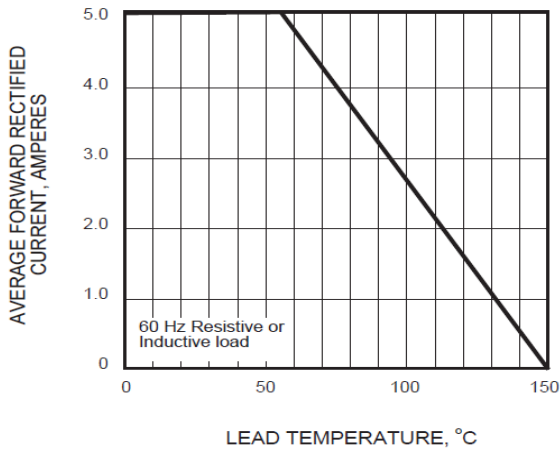


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

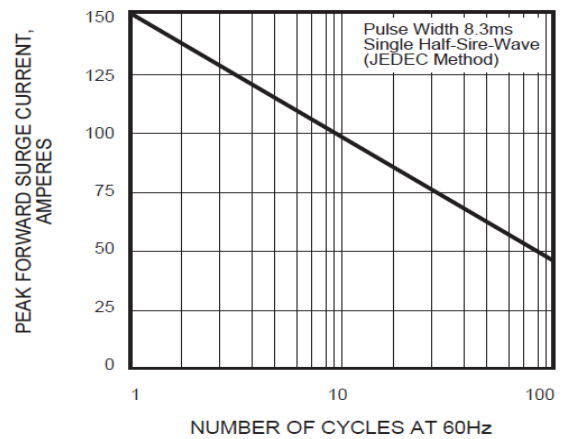


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

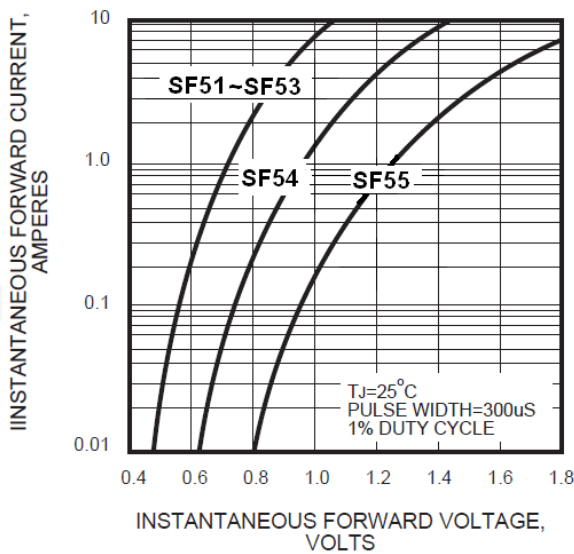


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

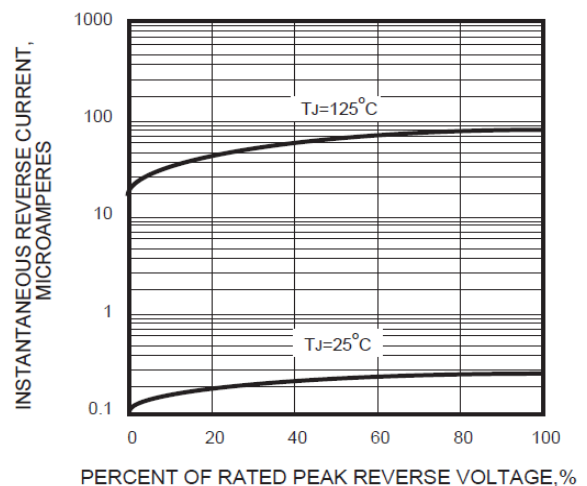


FIG.5 - TYPICAL JUNCTION CAPACITANCE

