

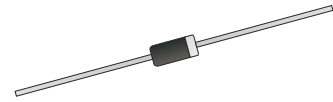
SF54-HF

Voltage: 200 V

Current: 5 A

RoHS Device

Haolgen Free

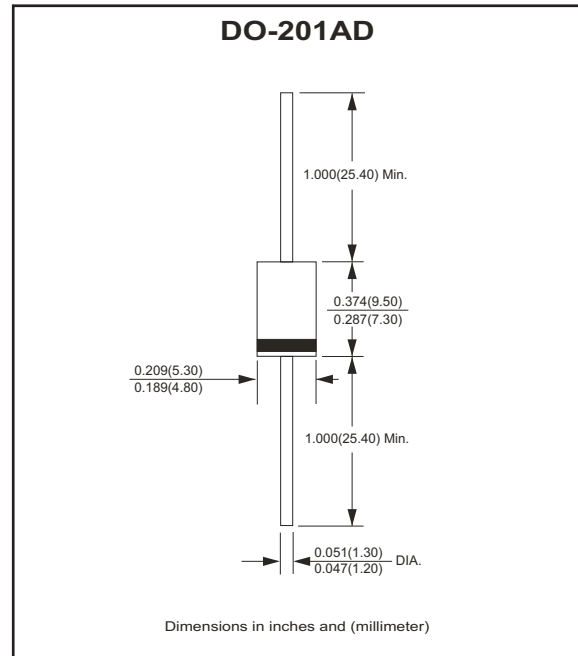


Features

- Low forward drop down voltage.
- High surge current capability.
- Super fast switching speed for high efficiency
- Open junction chip structure.
- High reliability.

Mechanical data

- Case: Molded plastic, DO-201AD
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end.
- Mounting position: Any
- Weight: 1.1 grams(approx.).



Circuit Diagram



Maximum Rating and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Peak repetitive reverse voltage		V_{RRM}			200	V
Working peak reverse voltage		V_{RMS}			140	V
DC blocking voltage		V_{DC}			200	V
Average forward rectified current	0.375"(9.5mm) lead length @ $T_A=55^\circ\text{C}$, see figure 1	$I_{(AV)}$			5	A
Peak forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method) $T_L=110^\circ\text{C}$	I_{FSM}			150	A
Maximum reverse recovery time	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$	T_{RR}			35	nS
Thermal resistance (Note 1)	Junction to ambient	$R_{\theta JA}$		20		$^\circ\text{C/W}$
Operating temperature range		T_J	-65		+125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-65		+150	$^\circ\text{C}$

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Instantaneous forward voltage	$I_F = 5\text{A}$	V_F			0.95	V
DC reverse current at rate DC blocking voltage	$V_R = V_{RRM}$, $T_A=25^\circ\text{C}$	I_R			5	μA
	$V_R = V_{RRM}$, $T_A=100^\circ\text{C}$				50	
Junction capacitance	$f = 1\text{ MHz}$ and applied reverse voltage of 4 volts	C_J		100		pF

Notes:

1. Thermal resistance from junction to ambient, both leads are attached to heatsink 20x20x1(mm) copper plate at lead length 5mm.

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

RATING AND CHARACTERISTIC CURVES (SF54-HF)

Fig.1 - Forward Current Derating Curve

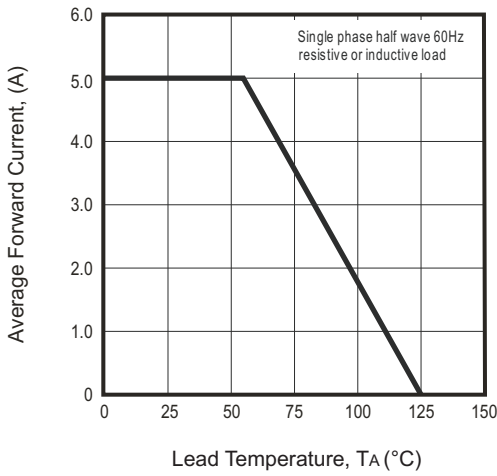


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

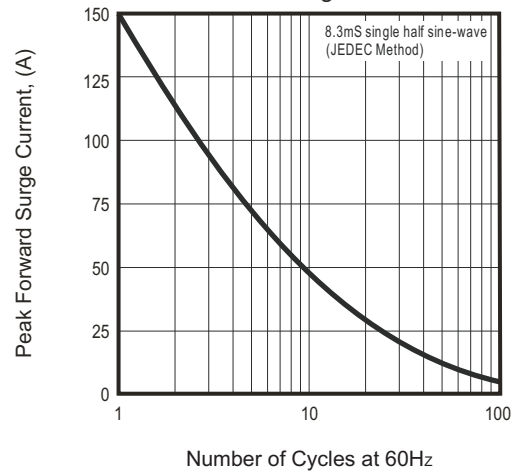


Fig.3 - Typical instantaneous Forward Characteristics

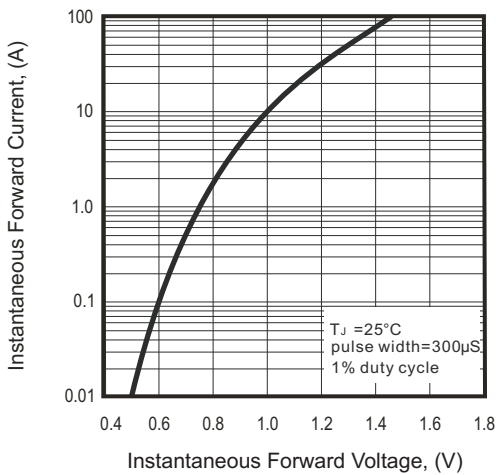


Fig.4 - Typical instantaneous Reverse Characteristics

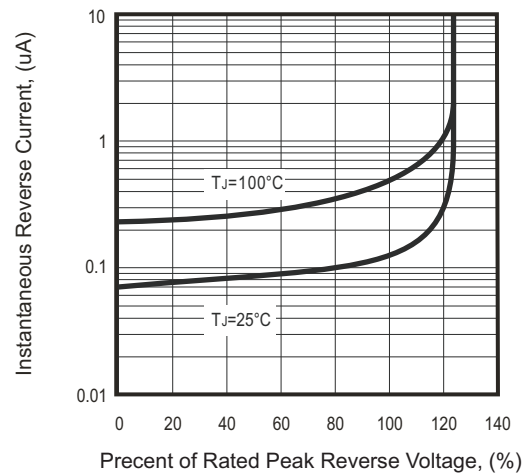


Fig.5 - Typical Junction Capacitance

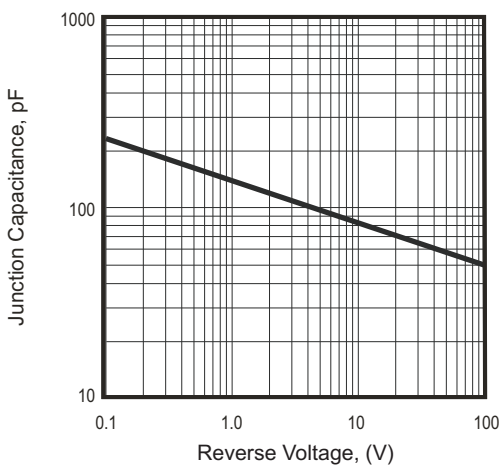
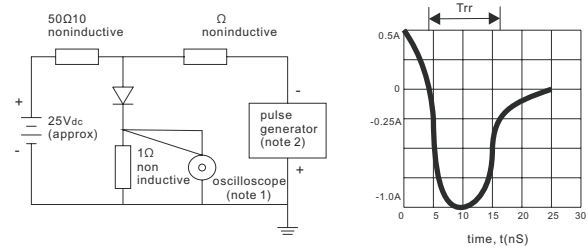
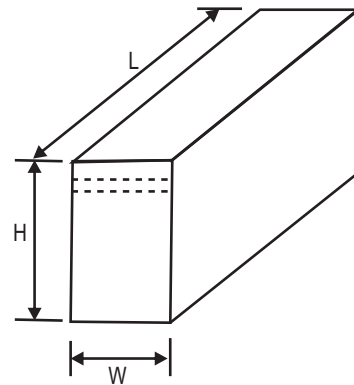
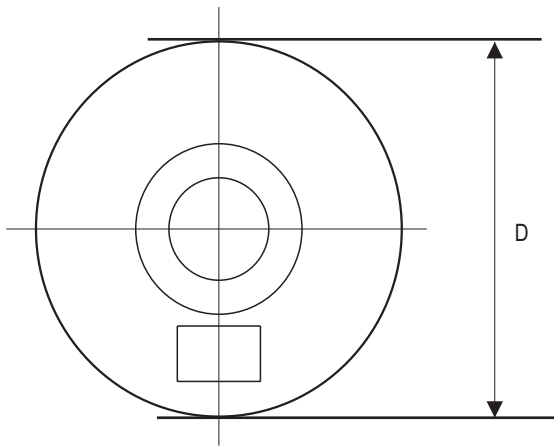
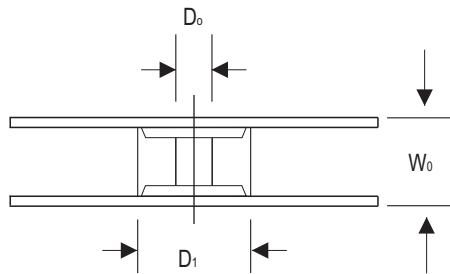
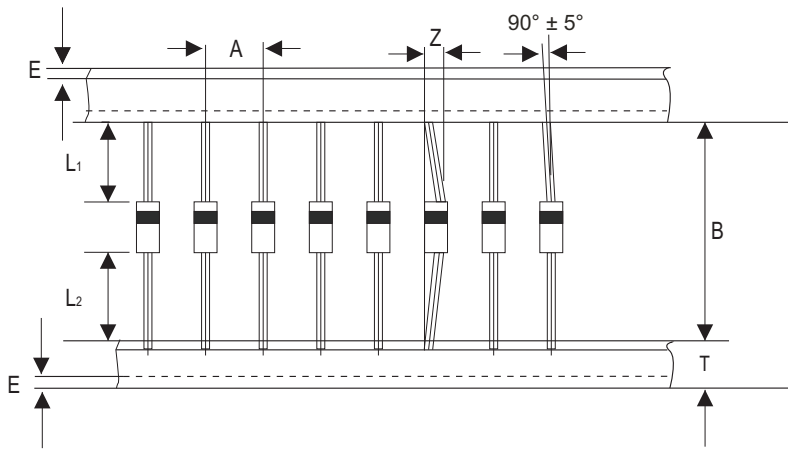


Fig.6 - Test Circuit Diagram and Reverse Recovery Time Characteristic



Note: 1. rise time=7nS Max. input impedance=1M Ω , 22pF
2. rise time=10nS Max. source impedance=80 Ω

Taping Specification For Axial Lead Diodes



DO-201AD	SYMBOL	A	B	Z	T	E	L1	L2
	(mm)	10.00 ± 0.50	52.40 ± 0.50	1.60 (max)	6.00 ± 0.40	0.80 (max)	1.00 (max)	1.00 (max)
	(inch)	0.394 ± 0.020	2.063 ± 0.020	0.063 (max)	0.236 ± 0.016	0.031 (max)	0.039 (max)	0.039 (max)

DO-201AD	SYMBOL	D1	D0	D	W0	L	W	H
	(mm)	82.20 ± 0.30	16.60 ± 0.40	330.00	77.00 ± 1.00	260.00	80.00	145.00
	(inch)	3.236 ± 0.012	0.654 ± 0.016	13.000	3.031 ± 0.039	10.236	3.150	5.709

Marking Code

Part Number	Marking code	Packaging
SF54T-HF	SF54H	REEL
SF54A-HF	SF54H	AMMO

Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
REEL PACK	T
AMMO PACK	A



SF54 = Product type marking code
H = Halogen Free

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	REEL SIZE (inch)
DO-201AD	1,200	13

Case Type	AMMO PACK	
	Q'TY / BOX (pcs)	Q'TY / CARTON (pcs)
DO-201AD	1,200	1200x10